Modernization of Urban Transport

(comparison study of Public Transport before and after implementation of ITS)

In context of AGRA-MATHURA CITY BUS TRANSPORT SERVICES AGRA.

AGRA AND MATHURA

AGRA:- Agra is a renowned and Historical city of India. Agra is a major tourist destination because of its many Mughal-era buildings, most notably the Taj Mahal, Agra fort and Fatehpur Sikari, all of which are UNSCO World Heritage Sites. Other than Taj Mahal, Red Fort, Fatehpur Sikri, Humayun Tomb, Sikandra, Etmatuddaula, Dayalbagh temple are also tourist attraction places of historical importance.

TAJ MAHAL

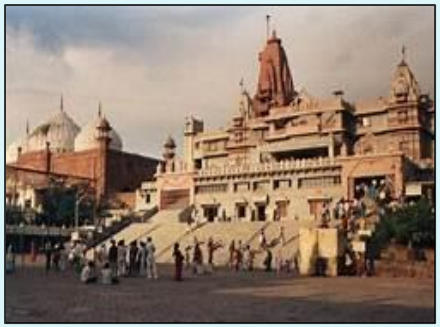
RED FORT

BULAND DARWAZA

PANCH MAHAL

MATHURA:- While Mathura a religious city has Lord Krishna Janma Bhumi, Vindravan, Barsana, Gokul and various famous Temples like Prem Mandir, Banke Bhihari Temple etc.

PREM MANDIR



JANAM BHUMI

VINDRAVAN

BARSANA

Agra has **170 CNG** operated city buses while Mathura has **60 diesel** operated city buses under **JNNURM** Scheme.

Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was a massive city-Modernization scheme launched by the Government of India under Ministry of Urban Development. It envisaged a total investment of over $20 billion over seven years. Named after Jawahar Lal Nehru, the first Prime Minister of India, the scheme was officially inaugurated by prime minister Man Mohan Singh on 3 December 2005 as a Programmer meant to improve the quality of life and infrastructure in the cities. It was launched in 2005 for a seven-year period (up to March 2012) to encourage cities to initiate steps for bringing phased improvements in their civic service levels. The government had extended the tenure of the mission for two years, i.e., from April 2012 to March 31, 2014.

JNNURM was a huge mission which relates primarily to development in the context of urban conglomerates focusing to the Indian cities. JNNURM aims at creating 'economically productive, efficient, equitable and responsive Cities' by a strategy of upgrading the social and economic infrastructure in cities, provision of Basic Services to Urban Poor (BSUP) .

Intelligent Transport management system

Intelligent transportation system is the application of sensing, analysis, control and communications technologies to ground transportation in order to improve safety, mobility and efficiency.

Intelligent transportation system includes a wide range of applications that **process and share information to ease congestion, improve traffic management, minimize environmental impact and increase the benefits of transportation to commercial users and the public in general.**

***The ITMS incorporates five smart transport sub-systems*:**

1. **Automated Fare Collection Service (AFCS):-** Quick and secure cashless payment via prepaid Ru Pay card or smart phone ensures greater convenience, passenger safety and ridership visibility.
2. **Automatic Vehicle Location System (AVLS):-** Real-time visualization of vehicle location via fitted GPS enables the city to calculate estimated time of arrival and support bus operations from a central command center to adhere to a planned schedule.
3. **Passenger Information System (PIS):-** Provide real-time bus information via mobile app, website and in-station boards to enable passengers to plan their route and estimate waiting and arrival times. Route and bus stop information is also provided via on-board displays and announcements.
4. **Vehicle Planning Schedule and Dispatch System (VPSD)**:- Bus routes and schedules optimized by analysis of bus travel performance and traffic volume.
5. **Depot Management System (DMS)**: Allocate and optimize crew and overall bus operations by automating the management of vehicles, fuel, inventory, personnel, and vehicle maintenance.

Objectives and goals of the ITMS in public perspective

Ticketing convenience-:	➢Online tickets can be booked from website and other leading ticketing portals. ➢ Tickets can also be booked by downloading the Apps on mobile phones. This also guarantees a seat in the bus. ➢ For on board tickets ETMs are used. Passengers get clear printed ticket with travel and price details and the digested data goes to the servers in real time via GPRS.
Payment convenience-:	➢ Passengers using the online ticketing options can make payments by credit/debit card, net banking or Interbank Mobile Payment System. ➢ Cash payment is accepted on counters or on board.
Green Initiative-:	➢ Passengers can use tickets in electronic format (on mobile phones or laptops along with photo id with no need for a print out.
Disaster management & 24x7 helpline- :	➢The SOS button the GPS installed in the bus send SOS message to the control room and regional officers who provide assistance in disaster/distress –accident/breakdown/ holdup as per standard operating practices.
Travel information-:	➢ The information of public interest, i.e. timetables, actual departures, delays, seat availability, booking assistance and various schemes are made available through Website, IVRS, SMS, LCD Display Boards, Automatic Announcement.

P.T.O.

Objectives and goals of the ITMS in public perspective

Revenue-:	➢The project enables auto digitization of revenue data and easy reconciliation. It also has a potential for incremental revenue from advertisements on tickets and LCD Displays at bus stations.
Operations Control-:	➢ Ensuring regularity & punctuality of services through effective monitoring, control on unauthorized halts of buses at wayside dhabas, checking over speeding, unscheduled operations, fuel consumption & cost control.
Cost Cutting-:	➢ Reduction in manual work, staff cost on ticketing &accounting revenue & fuel pilferage and enforcement requirements.

ETM Benefits being derived after use- in AMCTSL

Before

- Manual Ticketing System
- Passenger dislike the earlier manual ticket .
- 20 Manual ticket used to take 2 min.

Old Ticket

New Ticket

After

Benefits for Commuters-

- Passengers can produce the ticket as a proof for documentary support.
- Unlike the earlier pre-printed manual ticket system all the information are available to passengers like-depot name, vehicle no, place name, fare details etc.
- Time taken in ticketing to commuters is very less. In issuing 20 tickets used to take 2 min. and now it takes 1 min. There is approxi. 50% time saving to commuters.

Benefits for Organization-

- **Reduction in costs relating to printing and stationary**

  Past we have use the manual tickets with waybill & abstract which cost is very high for printing ETM have less paper use printing ticket size 2'' inch minimum 200 to 250 tickets with vigilance report in roll. AMCTSL also having the computerized duty slip which very cheaper in cost. AMCTSL also using the computerized waybill on A4 paper for the less use stationary. For past we have issued a different-2 type of type issued to conductor for the passengers but ETM have only single equipment for the ticket cash counting and reports which cost is very low and user friendly for the conductors to facilitate the passengers.

PTO

ETM Benefits being derived after use- in AMCTSL

Before

- **No Payment Gateway**

After

- **Leave no scope of paper corruption.**
  ETM having the facility of no extra paper couldn't be printed. If conductor print any type of reports there will be facility of autogenration activity log for monitoring
- Automatic cash counting and transaction tracking has reduced the level of labor needed as well as the potential for fraud or theft
- Generate MIS reports based on the ticket data from the ETMs
- For generation of tickets according to the fare rules of Corporation for different types of passengers indifferent types of services and buses, for different day types.
- Logging of inspector remarks and generation of penalty tickets.
- Generation of reports pertaining to the ticketing activities.
- Better decision making on account of generation scientific information.
- Less or no fatigue to conductors.
- Better Labour relations.
- ETM system has been great help in case of services operated with just driver cum conductor Ticket through ETM.

Old Ticket

New Ticket

PTO

ETM Benefits being derived after use- in AMCTSL

Before

- **Contract with 3rd Party Website**

After

- Instant analysis of traffic pattern.
- ETM system has been great help in case of services operated with just driver cum conductor Ticket through ETM.
- The ETMs can print 3000 tickets, including the journey report and this would facilitate vigilance by the corporation's checking inspectors. The ticket details which are captured in the ETM are uploaded to the computer at the end of day for account settlement and reconciliation.
- Lost ETM will be automatically locked after a period decided by the management.
- Results have shown the increase in traffic revenue by 4% to 5% on account of introduction of ETM, as the system provides no scope for revenue leakage.

Old Ticket

New Ticket

Better Ticketing Solutions

Smart E-Ticketing

Universal Connectivity
Dual-sim 4G with SAM, GPS, Bluetooth, Wi-fi and more…

OTA Updates
Near-instant deployment of new apps, updates, new fare structures…

High Capacity Battery
4,400 mAH, can last 2 full shifts

Always Connected
No more manual server uploads as all transactions transmitted in real-time

No Training Needed
Training time cut from several days to 10 mins familiarisation module.

Payment Options
Swipe and Chip Card, Biometric, NFC, Smart Card, M-ticket and more…

Flexible Android-based Platform
5.5 IPS LCD touch display for easy to use GUI-based ticketing app

Benefits Over Existing Solution Delivered

- ✓ **30% faster ticket printing time**
  Tested on 25 continuous tickets, 100% battery
- ✓ **70% savings on waybill upload**
  Time Tested under identical network conditions
- ✓ **33% faster generation of current trip report**
  Tested both during and after completion of trips
- ✓ **25% faster trip-wise revenue report printing**
  Tested both during and after completion of trips
- ✓ **Up to 50% less key taps for key tasks for crew**
  Tested both during and after completion of trips

Two Observations

1. 99.98% ETIM Device Uptime

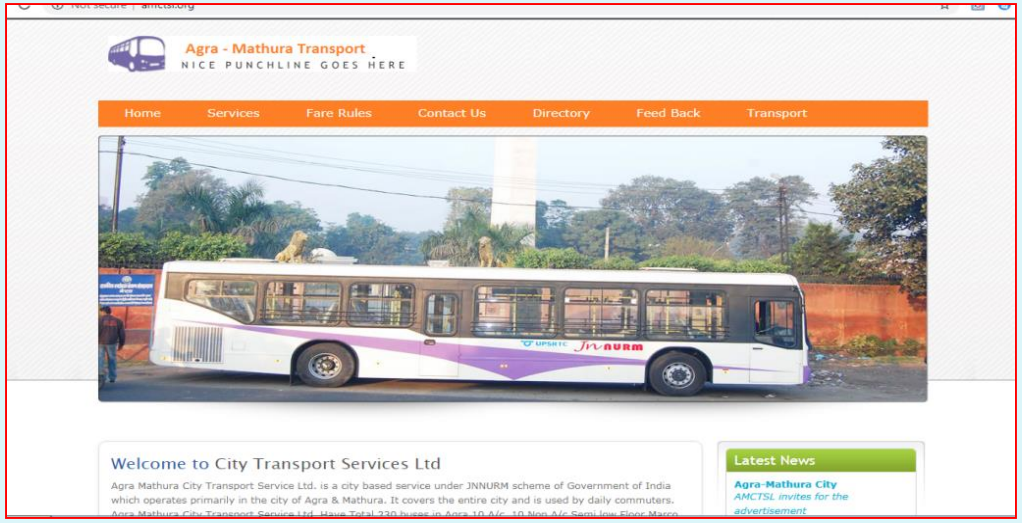
There was just 1 instance of a device crash in over 3,800 hours of field testing. The issue was resolved in minutes with a simple re-boot.

2. ~97% Successful Daily Reconciliations

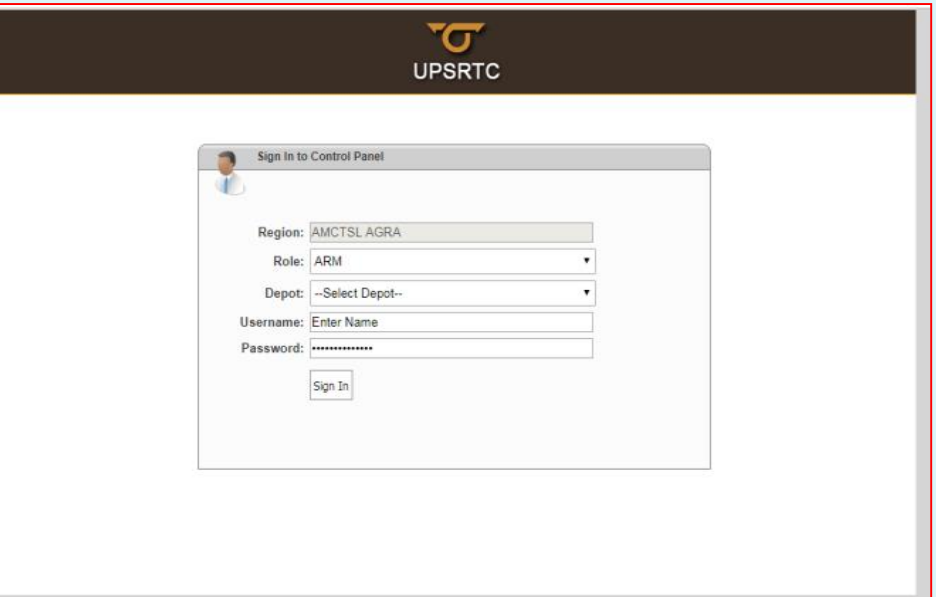
In ~3% cases errors are reported due only to an incomplete IT integration with existing systems

Web Services

www.amctsl.org



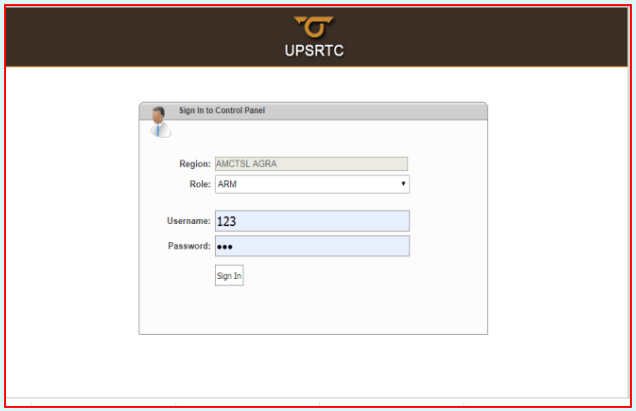
agr.amctsl.org



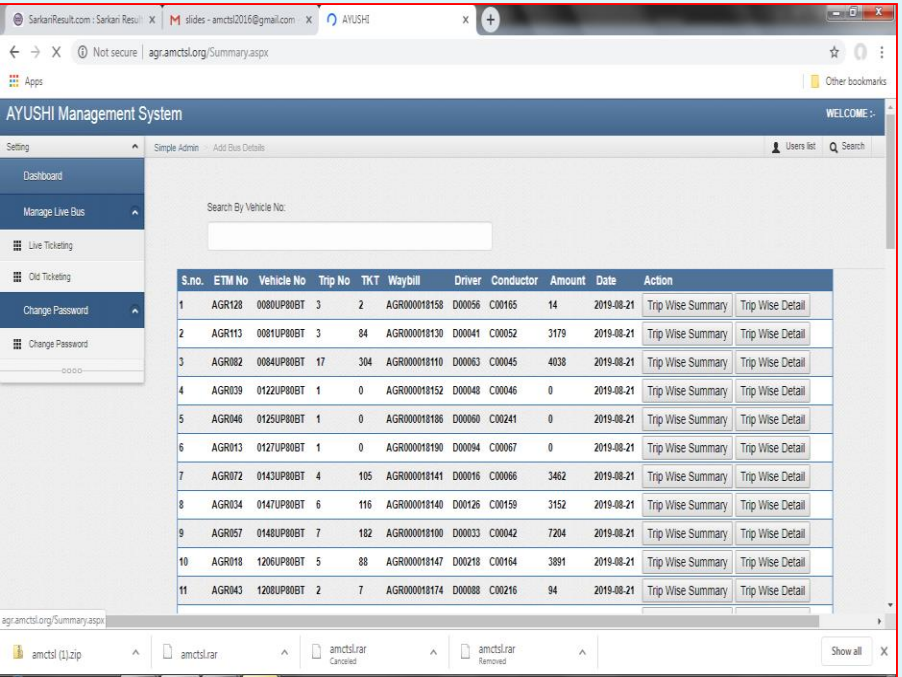
mtr.amctsl.org

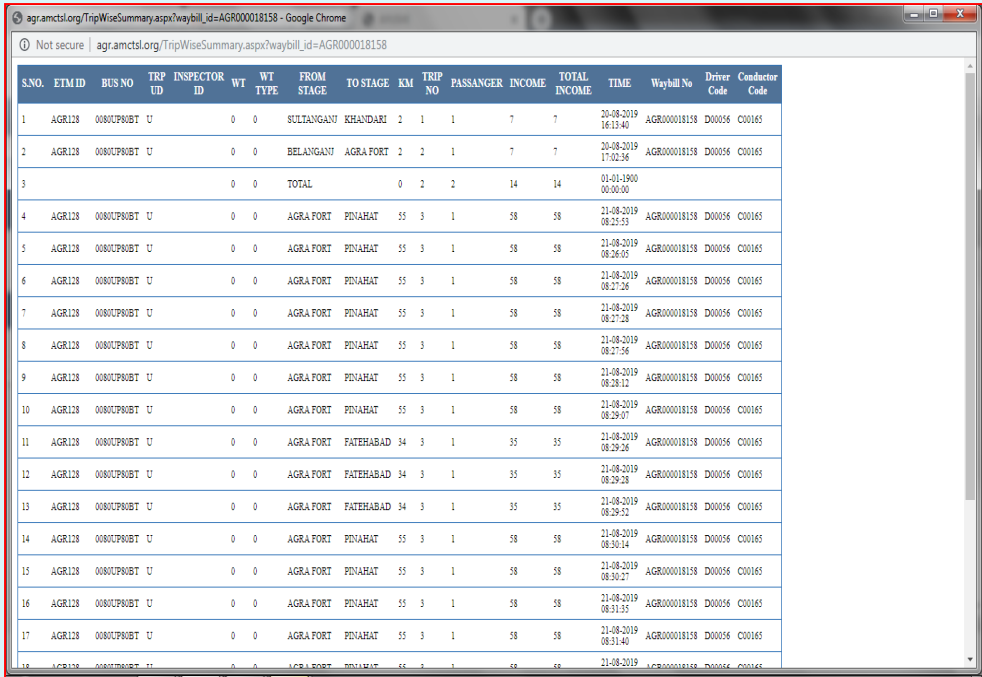
Web Service Login web side- amctsl.org

AGRA JNNURM



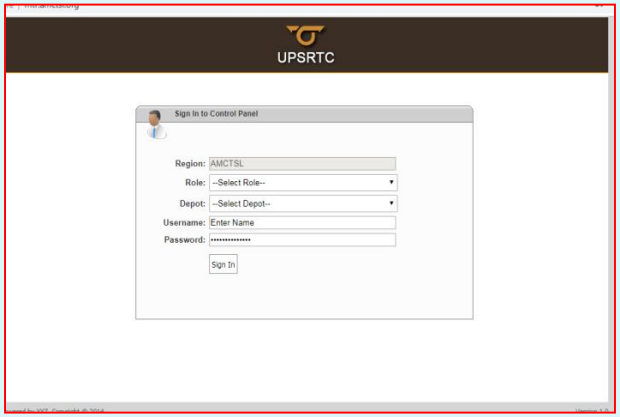
All Vehicle information- ETM NO., Trip No, TKT, Waybill No, Driver/Conductor Name, Date, etc



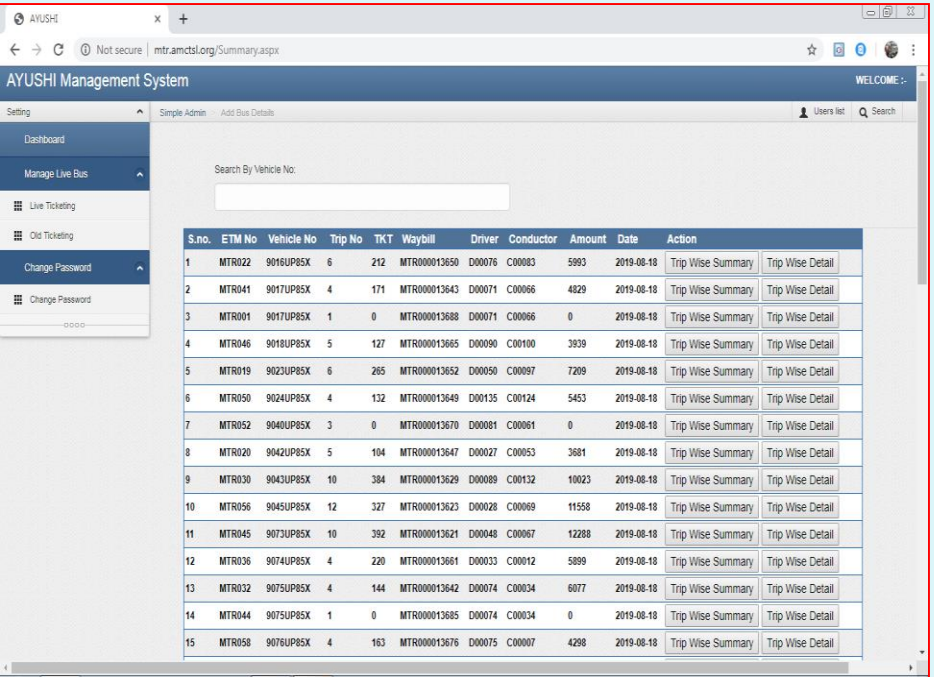


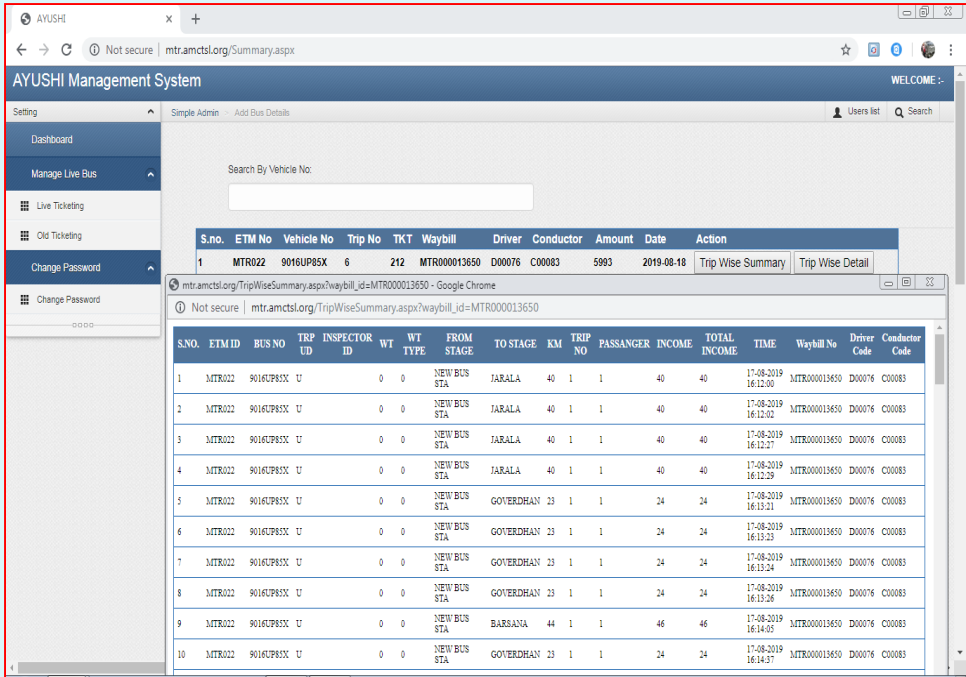
Web Service Login web side- amctsl.org

MATHURA JNNURM



All Vehicle information- ETM NO., Trip No, TKT, Waybill No, Driver/Conductor Name, Date, etc





MONITORING OF CORRUPTION (WITHOUT TICKETS) THROUGH ETM DATA.

AMCTSL

Trip Wise Report

Waybill No:	MTR000013492	Conductor :	150 MANISH KUMA	200
ETM ID:	9686UP85X	Driver:	168 SUNIL SHUK	248
Bus No:	9686UP85X	Issue Date	2019-08-13	

ETM	Trip	U/D	Tkt No	From Stage	To Stage	Ins Tkt	KM	Pass	Amt	T Amt	Date & Time
MTR046	1	U	22362	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:29 PM
MTR046	1	U	22363	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:29 PM
MTR046	1	U	22364	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:29 PM
MTR046	1	U	22365	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22366	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22367	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22368	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22369	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22370	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22371	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:30 PM
MTR046	1	U	22372	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:31 PM
MTR046	1	U	22373	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:31 PM
MTR046	1	U	22374	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:31 PM
MTR046	1	U	22375	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:31 PM
MTR046	1	U	22376	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:31 PM
MTR046	1	U	22377	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:33 PM
MTR046	1	U	22378	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:33 PM
MTR046	1	U	22379	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:34 PM
MTR046	1	U	22380	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:34 PM
MTR046	1	U	22381	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:34 PM
MTR046	1	U	22382	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:34 PM
MTR046	1	U	22383	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:37 PM
MTR046	1	U	22384	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:39 PM
MTR046	1	U	22385	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:39 PM
MTR046	1	U	22386	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:39 PM
MTR046	1	U	22387	NEW BUS STA	GOVERDHAN	0	23	1	24	24	13-Aug-19 5:39 PM
MTR046	1	U	22388	NEW BUS STA	ADEEHG	0	16	1	17	17	13-Aug-19 5:41 PM

1

MTR046	4	D	22455	GOVERDHAN	NEW BUS STA	0	23	1	24	24	13-Aug-19 9:06 PM
MTR046	4	D	22456	GOVERDHAN	NEW BUS STA	0	23	1	24	24	13-Aug-19 9:07 PM
MTR046	4	D	22457	GOVERDHAN	NEW BUS STA	0	23	1	24	24	13-Aug-19 9:08 PM
MTR046	4	D	22458	GOVERDHAN	NEW BUS STA	0	23	1	24	24	13-Aug-19 9:08 PM
MTR046	4	D	22459	GOVERDHAN	NEW BUS STA	0	23	1	24	24	13-Aug-19 9:08 PM
MTR046	5	U	22460	NEW BUS STA	GOVERDHAN	0	23	1	24	24	14-Aug-19 5:57 AM
MTR046	5	U	22461	NEW BUS STA	GOVERDHAN	0	23	1	24	24	14-Aug-19 5:58 AM
MTR046	5	U	22462	NEW BUS STA	GOVERDHAN	0	23	1	24	24	14-Aug-19 5:58 AM
MTR046	5	U	22463	NEW BUS STA	GOVERDHAN	0	23	1	24	24	14-Aug-19 5:58 AM
MTR046	5	U	22464	NEW BUS STA	GOVERDHAN	0	23	1	24	24	14-Aug-19 5:58 AM
MTR046	5	U	22465	NEW BUS STA	GOVERDHAN	0	23	1	24	24	14-Aug-19 5:58 AM
MTR046	5	U	22466	NEW BUS STA	DAROLI	0	37	1	37	37	14-Aug-19 5:59 AM
MTR046	5	U	22467	GOVERDHAN	BARSANA	0	21	1	22	22	14-Aug-19 6:49 AM
MTR046	5	U	22468	GOVERDHAN	BARSANA	0	21	1	22	22	14-Aug-19 6:49 AM
MTR046	5	U	22469	GOVERDHAN	BARSANA	0	21	1	22	22	14-Aug-19 6:49 AM
MTR046	5	U	22470	GOVERDHAN	BARSANA	0	21	1	22	22	14-Aug-19 6:49 AM
MTR046	5	U	22471	GOVERDHAN	BARSANA	0	21	1	22	22	14-Aug-19 6:50 AM
MTR046	5	U	22472	GOVERDHAN	BARSANA	0	21	1	22	22	14-Aug-19 6:50 AM
MTR046	5	U	22473	GOVERDHAN	KOSI	0	41	1	43	43	14-Aug-19 6:52 AM
MTR046	5	U	22474	GOVERDHAN	KOSI	0	41	1	43	43	14-Aug-19 6:54 AM
MTR046	5	U	22475	BARSANA	KOSI	0	20	1	21	21	14-Aug-19 7:29 AM
MTR046	5	U	22476	BARSANA	KOSI	0	20	1	21	21	14-Aug-19 7:31 AM
MTR046	5	U	22477	BARSANA	KOSI	0	20	1	21	21	14-Aug-19 7:31 AM
MTR046	5	U	22478	SANKET	KOSI	0	14	1	15	15	14-Aug-19 7:31 AM
MTR046	5	U	22479	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:46 AM
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MTR046	5	U	22485	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22486	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22487	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM

4

MTR046	5	U	22488	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22489	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22490	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22491	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22492	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22493	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22494	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22495	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
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MTR046	5	U	22501	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
MTR046	5	U	22502	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:47 AM
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MTR046	5	U	22508	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:48 AM
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MTR046	5	U	22510	NAND GAON	KOSI	0	11	1	12	12	14-Aug-19 7:49 AM
MTR046	5	U	22511	BARSANA	KOSI	5	0	0	0	1050	14-Aug-19 7:52 AM
MTR046	6	D	22512	KOSI	BARSANA	0	20	1	21	21	14-Aug-19 8:39 AM
MTR046	6	D	22513	KOSI	BARSANA	0	20	1	21	21	14-Aug-19 8:40 AM
MTR046	6	D	22514	KOSI	GOVERDHAN	0	41	1	43	43	14-Aug-19 8:41 AM
MTR046	6	D	22515	KOSI	BARSANA	0	20	1	21	21	14-Aug-19 8:41 AM
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MTR046	6	D	22517	KOSI	GOVERDHAN	0	41	1	43	43	14-Aug-19 8:43 AM
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MTR046	6	D	22519	KOSI	SANKET	0	14	1	15	15	14-Aug-19 8:43 AM
MTR046	6	D	22520	KOSI	BIJAGOSHA	0	34	1	34	34	14-Aug-19 8:44 AM

TIME OFFICE SOFTWARE

Old and New Duty Slip-- Benefits use- in AMCTSL

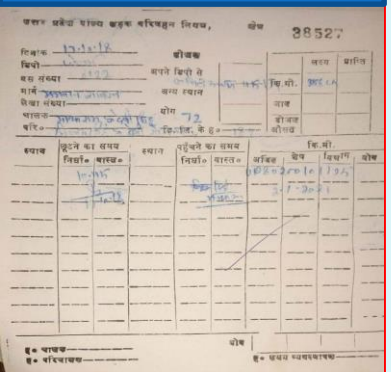
Before

- In Old Duty Slip date and time was not recorded.
- In Old Duty Slip driver/Conductor photos were not available.
- In Old Duty Slip issuing used to take around 5 minutes.

After

- New duty slip is generated in less than one minute time.
- In New duty slip generation system driver/ conductor's complete information is available such as Name/ Father's Name/ Date of birth/target of km./income. etc.
- When Driver's License is valid only & only then the duty slip is generated .
- During Checking of buses at routes identification of driver/conductor by the photograph is verified.
- Driver/Conductor's periodic duty allotments is easily/ efficentely possible.
- Time office Software data is fully Secured with user Id & password.

Old Duty Slip



New Duty Slip

TIME OFFICE SOFTWARE-

Final Duty Slip information Driver and Conductor with Photo.

AGRA MATHURA CITY TRANSPORT SERVIES LTD

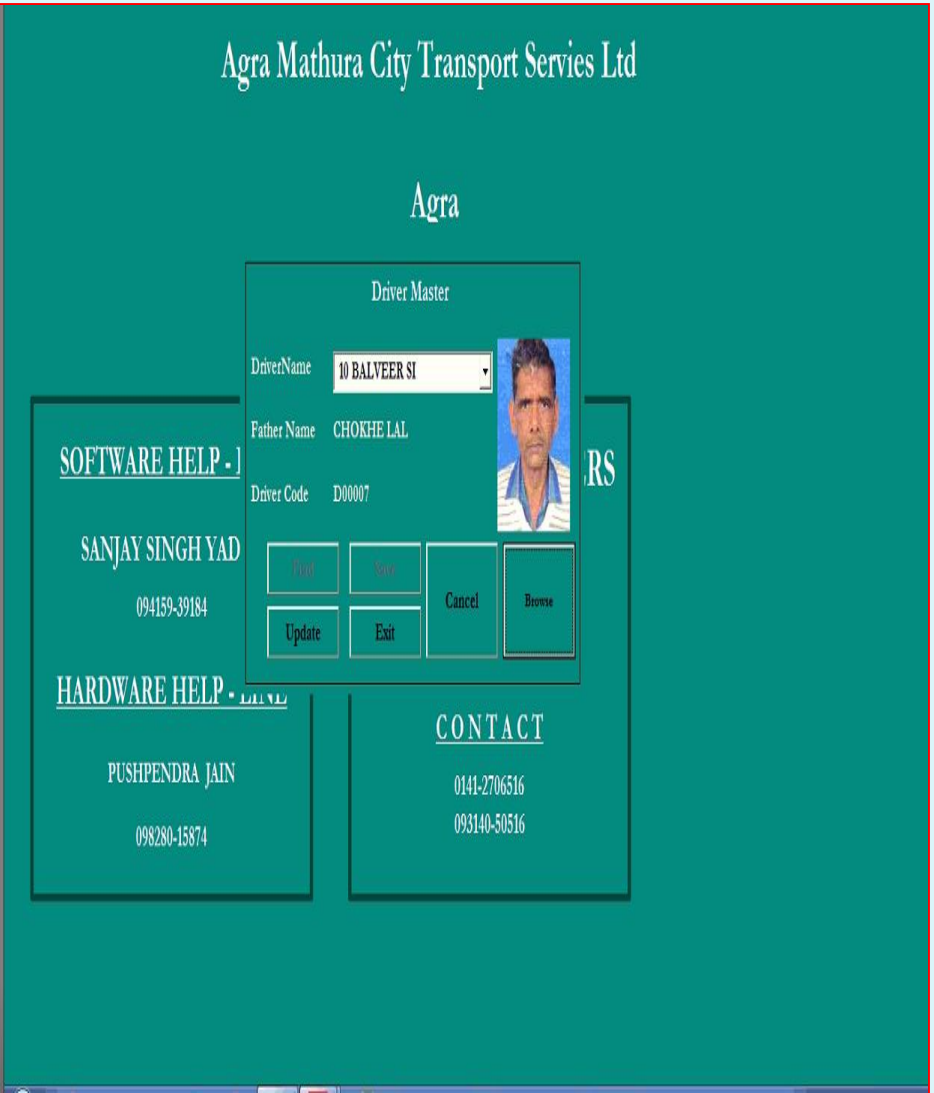
AGRA

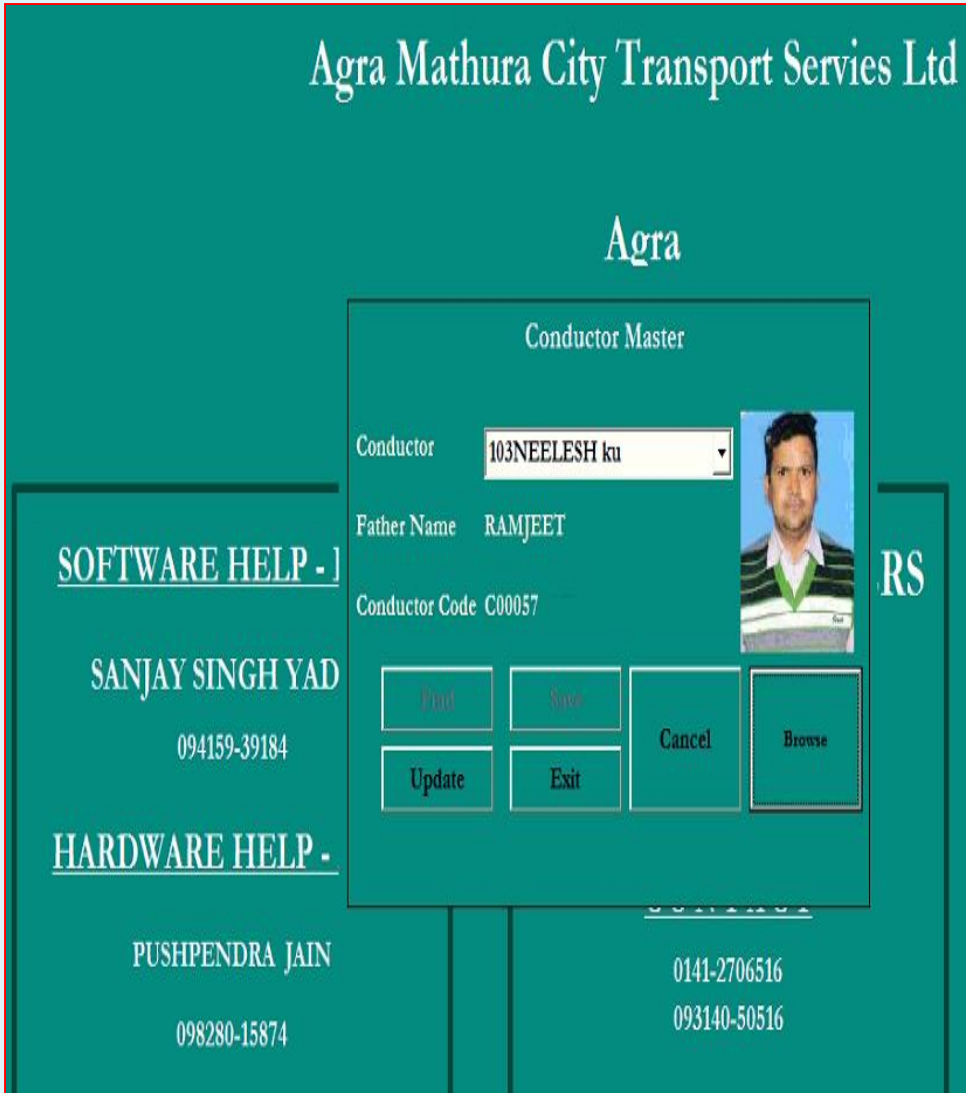
Duty Slip No :-	13173	**Date**	19-Aug-19
Bus Number :-		**PrintDate**	19-Aug-19
9196UP80BM		**Sch Time :-**	07:30
		Act Time :-	6:58
		Route Name	07:30 - AGF TO TDL
Conductor Name :-	300 PRAMOD KUM	**Driver Name :-**	13 BHAGVAN SIN
Conductor Father	SHRI KRISHNA	**Driver Father:-**	POORAN SINGH
Suh K.M :-	462	**Bus Category**	MAZADA
Suh Trip :-	20	**Targate Income**	11550

(Incharge Sig.) (Conductor Sig.) (Driver Sig.)

TIME OFFICE SOFTWARE

Driver/Conductor Master Photo update information





TIME OFFICE SOFTWARE-

Duty Allotment Information and bus no, Driver name, Conductor name, etc.

Allotment For Months

Sch Dep Time: 04:00

Bus No: 9157UP80BP

Service Code: 04:00 - IDG TO FAT aaaa

Driver: 102 PREETAM SI aaaa aaaa

Conductor: 260 PAWAN SINGH aaaa aaaa

Lock: N

New | Save | Modify

Cancel | Exit | Print

Time	Bus No	Service	Driver	Conductor	loc
04:00	9157UP80BP	04:00 - IDG TO FAT	102 PREETAM SI	260 PAWAN SINGH	N
05:00	0079UP80BT	05:00 - AGF TO BAH	41 GAJENDRA S	103 NEELESH KU	N
05:00	0085UP80BT	05:00 - AGF TO KHRGH	175 UDAYVEER S	197 VISNU KUMA	N
05:00	0081UP80BT	05:00 - AGF TO PINHAT	62 LAXMIKANT	267 NARESH KUMAR	N
05:00	9165UP80BM	05:00 - AGF TO TDL	77 MUKESH KUM	188 VIJAY KISH	N
05:00	9249UP80BM	05:00 - AGR TO FZD	108 RAJEEV KUM	331 BHUPENDRA KUMAR	N
05:00	9140UP80BP	05:00 - BHGWN TO AGC	55 KISHAN SIN	205 YOGENDRA S	N
05:00	4801UP32CZ	05:00 - BHGWN TO AGC	9 AYUB KHAN	26 BALRAM SIN	N
05:00	0125UP80BT	05:00 - BHGWN TO AGC	84 NIROTI LAL	38 DEEPCHAND	N
05:00	4732UP32CZ	05:00 - BHGWN TO CANTT	167 SREE BHAGW	338 ROBIN	N
05:00	0080UP80BT	05:00 - BHGWN TO ROHTA	104 PREM SINGH	151 ROHIT KUMA	N
05:00	0121UP80BT	05:00 - BHGWN TO SAWLA	200 VEERENDRA	237 YATISH KUMAR	N
05:00	9161UP80BP	05:00 - IDGH TO FTHPR	307 SHIV SHANKR	308 TRIDEV KUMAR	N
05:00	9150UP80BP	05:00 - IDGH TO FTHPR	260 DAL VIR SINGH	93 MOHAN SING	N
05:05	1207UP80BT	05:05 - BHGWN TO AGC	95 PRAMOD KUM	73 KAMAL SING	N
05:10	9202UP80BM	05:10 - AGR TO FZD	150 SATENDRA S	289 RAJEEV KUMAR	N
05:10	0079UP80BT	05:10 - BHGWN TO AGC	47 HOSHIYAR S	191 VIMLESH KU	N
05:15	0089UP80BT	05:15 - AGF TO KHRGH	106 PUSPENDRA	81 MAHESH CHA	N
05:15	9184UP80BM	05:15 - AGF TO TDL	300 MURAREE LAL	11 AMAR SINGH	N
05:15	9267UP80BK	05:15 - BHGWN TO CANTT	201 ALOK KUMAR	178 SUVENDRA K	N
05:15	0082UP80BT	05:15 - BHGWN TO ROHTA	180 VIJAY SING	207 BANTU SING	N
05:15	0122UP80BT	05:15 - BHGWN TO SAWLA	72 MAYARAM	139 RAMESH CHA	N

TIME OFFICE SOFTWARE REPORT

1. Login Screen
2. User Management / Master
3. Privilege Management
4. Employee Master
5. Duty master
6. Depot Master
7. Duty Trip Details
8. Out Shedding Details
9. Group Master
10. Calendar entry
11. Conductor Driver Pairing Master
12. Daily Roaster (Editable)
13. Route Departure Master
14. Vehicle Master
15. Bus Type Master
16. Route Master
17. Route Details
18. Fare table Base fare
19. Fare table Graph (Fill & Edit)
20. Inspector remark master
21. Crew Attendance
22. Cash Collection entry
23. ETM Issue details
24. Daily Status

Management Information System (MIS)
Data Benefits being derived after use- in AMCTSL

Before

- When ETM Machines were not in use reselling of cut ticket's was frequent.
- More manual work was required for generation of MIS reports.

After

- MIS Data Provide web service .

  Login web side-amctsl.org.
- Security System uses . User id and Password
- Tickets Information.

  (Benefits -Only Department uses.)
- Report- All Vehicle Information- ETM No, Trip No, Waybill No. date and time.
- Vehicle/Driver/Conductor Wise Daily Report and Monthly Report.
- Waybill wise daily Information.

DETAILS OF REPORTS D.V.R. SOFTWARE

(Benefits- Department)

- Daily Vehicle Report (D.V.R)
- Route wise Summary (New Report)
- Personal ledger of Conductor, Driver, Bus, Route.
- Summarized ledger of Conductor, Driver, Bus and Route.
- Analysis reports means in which you can put any query to generate the report according to you
- Comparison of performance of Conductors and Drivers on any route or bus.
- SAMVIDA BILLS **(DRIVER/CONDUCTOR SALARY BILL)**
- Collection Report
- Income & Expenditure Statement
- Comparison between Conductors, Drivers, Route and Bus No.
- Diesel / Gas Average of buses
- WT reports
- Checking Squad performance report

DVR SOFTWARE

REPORT- D.V.R. AND R.T.C.4

INFORMATION- K.M., TRIP, INCOME, IPKM, LF, YATRI, FCI, FLEET, B.U., INCOME PER BUS, GAS (QTY) AND GAS (AVG).

AGRA
D.V.R. JNNURM DEPOT

DATE : 31/08/2019 LETTER NO. : DATE :

	K.M. SCHEDULE	K.M. ACTUAL	K.M. CURTAIL	TRIP SCHEDULE	TRIP ACTUAL	NET INCOME	IPKM	LF	YATRI	FCI	FLEET	B U	INCOME PER BUS	GAS (QTY)	GAS (AVG)
TATA KAMAL															
31/08/2019	113905	6634	7271	213	0	1672254.25	25.21	69	7965	36.48	75	85	2230.00	1572.77	4.22
CURRENT MONTH (PROG.)	431055	202417	228638	6602	3027	5185550.00	25.62	70	23810	36.48	75	87	2220.00	51180.89	3.95
LAST YEAR (PROG.)	390600	2743?9	116271	5611	5254	6484796.00	23.64	65	30?609	36.48	75	118	2789.00	61174.35	4.48
LAST MONTH (PROG.)	431055	223924	207131	6603	3411	5698246.00	25.45	70	25?787	36.48	75	96	2451.00	51979.04	4.31
DIFF.LAST YEAR (PROG.)	40455	-71918	112367	992	-2227	-1292246.00	1.88	5	-6?609			-31	-559.00	-9993.46	
DIFF.LAST MONTH (PROG.)	0	-21507	21507	0	-384	-512696.00	0.17	0	-22937			-9	-221.00	-798.15	
MARCOPOLO A/C															
31/08/2019	145	108	36	7	0	2881.00	27.35	60	838	54.38	10	11	298.00	60.20	1.81
CURRENT MONTH (PROG.)	4495	3977	518	217	116	134243.00	33.75	62	6906	54.38	10	13	433.00	2447.20	1.63
LAST YEAR (PROG.)	4495	9858		217	404	322454.00	32.38	60	15981	54.38	10	32	1040.00	5823.54	1.80
LAST MONTH (PROG.)	4495	3037	1458	217	75	74855.00	24.65	45	5?03	54.38	10	10	241.00	1621.22	1.87
DIFF.LAST YEAR (PROG.)	0	-5982	5982	0	-288	-189211.00	1.37	2	-8995			-19	-607.00	-3076.24	
DIFF.LAST MONTH (PROG.)	0	940		0	41	59388.00	9.10	17	2793			3	192.00	825.98	
MARCOPOLO NON A/C															
31/08/2019	0	70		0	0	2225.00	31.79	95	170	33.60	10	7	223.00	60.42	1.16
CURRENT MONTH (PROG.)	0	807		0	22	20202.00	25.03	74	1364	33.60	10	3	65.00	420.19	1.92
LAST YEAR (PROG.)	0	7212		0	291	192099.00	26.77	80	12?92	33.60	10	23	623.00	3096.42	2.23
LAST MONTH (PROG.)	0	984		0	37	35862.00	36.45	108	1683	33.60	10	5	116.00	440.74	2.23
DIFF.LAST YEAR (PROG.)	0	-6406	6406	0	-259	-172837.00	-1.74	-6	-12427			-20	-558.00	-2676.24	
DIFF.LAST MONTH (PROG.)	0	-177	177	0	-15	-15660.00	-11.42	-24	-1319			0	-51.00	-20.55	
SWARAJ MAZDA															
31/08/2019	9830	8536	1294	123	0	135648.00	16.01	60	5883	26.88	75	114	1822.00	1222.04	6.99
CURRENT MONTH (PROG.)	304730	254526	50204	3813	2618	4229488.00	17.01	63	15?820	26.88	75	109	1862.00	36700.48	6.94
LAST YEAR (PROG.)	221154	242115		3441	4123	4089772.00	16.89	63	17?638	26.88	75	104	1759.00	35503.97	6.82
LAST MONTH (PROG.)	304730	250752	53978	3813	2698	4044886.00	16.13	60	14?265	26.88	75	100	1740.00	34936.24	7.19
DIFF.LAST YEAR (PROG.)	83576	12411	71165	372	-1505	240716.00	0.12	0	-24818			5	103.00	1196.51	
DIFF.LAST MONTH (PROG.)	0	3774		0	-80	284602.00	0.88	3	8454			1	122.00	1764.14	
TOTAL															
31/08/2019	23880	18348	5531	343	0	309078.25	20.14	61	11847	33.12	170	90	1818.00	2915.43	5.26
CURRENT MONTH (PROG.)	740280	461727	278553	10633	5783	9669483.00	20.94	63	40?010	33.12	170	88	1835.00	90748.76	5.09
LAST YEAR (PROG.)	616249	533616	82633	9269	10062	11089121.00	20.78	63	51?808	33.12	170	101	2104.00	105298.28	5.07
LAST MONTH (PROG.)	740280	478697	261583	10633	6221	9853849.00	20.59	62	41?119	33.12	170	91	1870.00	88977.24	5.39
DIFF.LAST YEAR (PROG.)	124031	-71889	195920	1364	-4279	-1419638.00	0.16	0	-11?99			-13	-269.00	-14549.53	
DIFF.LAST MONTH (PROG.)	0	-16970	16970	0	-438	-184366.00	0.36	1	-13009			-3	-35.00	1771.42	

AGRA JNNURM DEPOT.
R T C - 4
PERIOD : 01/08/2019 TO 31/08/2019

SNO	ROUTE NAME	LENGTH	BUSES SCH.	BUSES ACT.	TRIPS SCH	TRIPS ACTUAL	TRIPS CURT.	K.M. SCH.	K.M. ACTUAL	CURTAIL K.M. (%)	INCOME GROSS	INCOME NET	IPKM	LF	PASS.	BU
1	AGRA DARSHAN SEVA AC	30	1	0	217	0	(217)	4495	0	4495 (100)	0.00	0.00	0.00	0	0	0
2	AGRA PORT TO BARHAN	0	8	1	0	20		62000	9121	52879 (85)	130111.00	126361.00	13.85	52	3772	37
3	AGRA PORT TO BISAMAR	0	0	1	0	53		0	4039		71319.00	71319.00	17.66	48	2424	0
4	AGRA PORT TO SHATRI PU	0	5	0	620	0	(620)	37200	0	37200 (100)	0.00	0.00	0.00	0	0	0
5	AGRA TO FARAH MATHURA GCM	0	8	4	992	275	(717)	71300	40148	31152 (44)	739750.00	679925.00	16.94	46	16626	162
6	BHAGWAN TO BODLA	0	0	1	0	168		0	6755		121825.00	121675.00	18.01	67	8819	0
7	BIJLIGHAR TO SHAHSHABAD	0	8	1	465	45	(420)	26550	2579	23771 (90)	37680.00	36680.00	14.22	53	1118	10
8	BIJLIGHAR TO FARAH	0	10	0	248	0	(248)	37200	0	37200 (100)	0.00	0.00	0.00	0	0	0
9	BIJLIGHAR TO FIROZABAD	2325	5	0	496	0	(496)	14415	0	14415 (100)	0.00	0.00	0.00	0	0	0
10	BIJLIGHAR TO KHERAGARH	0	4	8	496	708		46500	73665		1564446.00	1507971.00	20.47	56	50543	594
11	BIJLIGHAR TO PINAHAT	0	6	11	496	1181		55800	108167		2388388.00	2384138.00	22.04	60	60663	582
12	BIJLIGHAR TO SHASTRI PURAM	0	8	0	124	0	(124)	15500	0	15500 (100)	0.00	0.00	0.00	0	0	0
13	BIJLIGHAR TO TUNDLA B/S	50	10	7	1860	774	(1086)	124000	72501	51499 (42)	1228356.00	1210426.00	16.70	62	39962	234
14	CANTT TO SHIKOHRAM	0	10	0	496	0	(496)	26040	0	26040 (100)	0.00	0.00	0.00	0	0	0
15	DABAR FACTORY	0	4	0	0	0		37200	0	37200 (100)	0.00	0.00	0.00	0	0	0
16	DAYALBAGH TO CANT	0	40	16	1519	1573		37200	61195		1899251.00	1894376.00	30.96	85	153630	49
17	DAYALBAGH TO SAINYA KOTA	0	10	4	1240	475	(765)	77500	26843	50657 (65)	575723.00	546073.00	20.34	56	42477	87
18	IDGAH TO FATEHPURSIKRI	30	8	5	744	356	(388)	39680	40498		716468.00	661143.00	16.33	61	22225	163
19	ISBT TO SADARAD	0	3	1	0	15		0	1730		24278.00	22758.00	13.15	36	750	19
20	R.T.O FITNESS	0	0	1	0	0		0	86		0.00	0.00	0.00	0	0	0
21	SHOE FACTORY	45	5	5	620	140	(480)	27900	14400	13500 (48)	229320.00	229320.00	15.93	44	0	93
22	M.S.T - TATA KAMAL								0		165318.00	165318.00			0	
23	SECURITY FEES - TATA KAMAL								0		12000.00	12000.00			0	
	TOTAL		153	66	10633	5783	(4850)	740280	461727	278553 (38)	9904233.00	9669483.00	20.94	63	403010	88

NOTE : CALCULATION OF TOTAL L F IS ON BASED OF FCI OF 33.12
: TOTAL FLEET : 170

DVR SOFTWARE

SAMVIDA BILLS **(DRIVER/CONDUCTOR SALARY BILL)**

DVR – DRIVER AND CONDUCTOR NAME , FATHER's NAME, DRIVER CODE, DUTY DAY, EARNED K.M. INCENTIVE, EPF, LIC, AND NET SALARY INFORMATION.

BENEFIT- Two Clerk for Agra & Two For Mathura were required for Posting of K.m./days of working/salary making was costing Rs. One Lac per month. Through ETM/MIS Data Saving of Rs. One Lac per month with minimum possibility of error has been implemented.

AGRA SALARY BILL

AGRA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
PAYMENT BILL OF SAMVIDA COND CONDUCTOR

SNO	NAME / FATHER'S NAME	DUTY DAYS	K.M.	WAGES (1)	INCENTIVE (2)	TOTAL (1+2)	EPF KM (0.50) (3)	EPF KM --- (BAL.)	TOTAL AMOUNT (1+2+4)	E P F AMOUNT (3*0.12)	NET AMOUNT
1	AARIF KHAN (PRD) PAPPU KHAN	(709-I) 25 (CITY LF - 0 RURAL LF - 82)	5502	11279.00	2500.00	13779.00	2751.00	8528.00	13779.00	330.00	13449.00
2	AJAY KUMAR (PRD) KALI CHARAN	(621-I) 29 (CITY LF - 0 RURAL LF - 79)	7934	16265.00	3000.00	19265.00	3967.00	12298.00	19265.00	476.00	18789.00
3	AJEET KUMAR SATVEER SINGH	(868-I) 3 (CITY LF - 0 RURAL LF - 76)	928	1902.00	0.00	1902.00	464.00	1438.00	1902.00	56.00	1846.00
4	AKHILESH PACHORI (PRD) RAKESH PACHORI	(693-I) 21 (CITY LF - 0 RURAL LF - 82)	3169	6496.00	0.00	6496.00	1585.00	4911.00	6496.00	190.00	6306.00
5	ALI MOHAMMAD KHAN (PRD) ASALAM KHAN	(650-I) 20 (CITY LF - 0 RURAL LF - 75)	4385	8989.00	0.00	8989.00	2193.00	6796.00	8989.00	263.00	8726.00
6	AMIT KUMAR (PRD) RAGHUBEHER SINGH	(677-I) 24 (CITY LF - 0 RURAL LF - 77)	5037	10326.00	2500.00	12826.00	2519.00	7807.00	12826.00	302.00	12524.00
7	AMITA KUMAR (PRD) BABU SINGH	(673-I) 9 (CITY LF - 0 RURAL LF - 85)	1572	3223.00	0.00	3223.00	786.00	2437.00	3223.00	94.00	3129.00
8	ANIL KUMAR NETRAPAL	(823-I) 24 (CITY LF - 0 RURAL LF - 77)	5003	10256.00	2500.00	12756.00	2502.00	7754.00	12756.00	300.00	12456.00
9	ANSHUL TYAGI (PRD) RAJANISH TYAGI	(769-I) 12 (CITY LF - 0 RURAL LF - 81)	1738	3563.00	0.00	3563.00	869.00	2694.00	3563.00	104.00	3459.00
10	ANUJ KUMAR SHARMA DEV DUTT SHARMA	(759-I) 24 (CITY LF - 0 RURAL LF - 81)	4963	10174.00	2500.00	12674.00	2482.00	7692.00	12674.00	298.00	12376.00
11	ARAB SINGH DHANI RAM	(788-I) 14 (CITY LF - 0 RURAL LF - 84)	2667	5467.00	0.00	5467.00	1334.00	4133.00	5467.00	160.00	5307.00
12	ARJUN SINGH (PRD) KUNDAN SINGH	(777-I) 22 (CITY LF - 0 RURAL LF - 86)	4792	9824.00	0.00	9824.00	2396.00	7428.00	9824.00	288.00	9536.00

MATHURA SALARY BILL

AGRA MATHURA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
PAYMENT BILL OF SAMVIDA COND CONDUCTOR

SNO	NAME / FATHER'S NAME	DUTY DAYS	K.M.	WAGES (1)	INCENTIVE (2)	TOTAL (1+2)	EPF KM (0.50) (3)	EPF KM - (BAL.)	TOTAL AMOUNT (1+2+4)	E P F AMOUNT (3*0.12)	NET AMOUNT
1	AARIF KHAN (PRD) PAPPU KHAN	(709-I) 17 (CITY LF - 0 RURAL LF - 81)	3167	6492.00	0.00	6492.00	1584.00	4908.00	6492.00	190.00	6302.00
2	AJAY KUMAR (PRD) KALI CHARAN	(621-I) 22 (CITY LF - 0 RURAL LF - 83)	5206	10672.00	0.00	10672.00	2603.00	8069.00	10672.00	312.00	10360.00
3	AJEET KUMAR SATVEER SINGH	(868-I) 6 (CITY LF - 0 RURAL LF - 71)	1020	2091.00	0.00	2091.00	510.00	1581.00	2091.00	61.00	2030.00
4	AKHILESH PACHORI (PRD) RAKESH PACHORI	(693-I) 27 (CITY LF - 0 RURAL LF - 88)	4533	9293.00	2500.00	11793.00	2267.00	7026.00	11793.00	272.00	11521.00
5	ALI MOHAMMAD KHAN (PRD) ASALAM KHAN	(650-I) 25 (CITY LF - 0 RURAL LF - 78)	4655	9543.00	2500.00	12043.00	2328.00	7215.00	12043.00	279.00	11764.00
6	AMIT KUMAR (PRD) RAGHUBEHER SINGH	(677-I) 28 (CITY LF - 0 RURAL LF - 82)	6065	12433.00	3000.00	15433.00	3033.00	9400.00	15433.00	364.00	15069.00
7	AMITA KUMAR (PRD) BABU SINGH	(673-I) 24 (CITY LF - 0 RURAL LF - 89)	4610	9451.00	2500.00	11951.00	2305.00	7146.00	11951.00	277.00	11674.00
8	ANIL KUMAR NETRAPAL	(823-I) 26 (CITY LF - 0 RURAL LF - 83)	6301	12917.00	3000.00	15917.00	3151.00	9766.00	15917.00	378.00	15539.00
9	ANSHUL TYAGI (PRD) RAJANISH TYAGI	(769-I) 13 (CITY LF - 0 RURAL LF - 97)	2005	4110.00	0.00	4110.00	1003.00	3107.00	4110.00	120.00	3990.00
10	ANUJ KUMAR SHARMA DEV DUTT SHARMA	(759-I) 25 (CITY LF - 0 RURAL LF - 81)	5074	10402.00	2500.00	12902.00	2537.00	7865.00	12902.00	304.00	12598.00
11	ARAB SINGH DHANI RAM	(788-I) 24 (CITY LF - 0 RURAL LF - 94)	5047	10346.00	2500.00	12846.00	2524.00	7822.00	12846.00	303.00	12543.00
12	ARJUN SINGH (PRD) KUNDAN SINGH	(777-I) 16 (CITY LF- 0 RURAL LF - 88)	2793	5726.00	0.00	5726.00	1397.00	4329.00	5726.00	168.00	5558.00

DVR SOFTWARE
REPORT- DRIVER WISE FUEL AVERAGE DATA

AGRA C.N.G AVERAGE

AGRA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
ANALYSIS OF DSL.AVG
CATEGORY : DRIVER DIESEL AVERAGE

SNO.	DRIVER		FATHER NAME		K.M. ACTUAL	K.M. DEAD	K.M. TOTAL	DIESEL	AVERAGE
01	RAKESH KUMAR	(88-.)	BABULAL	9171	4048	0	4048	503.99	8.03
02	MUKESH KUMAR	(361-K)	MANPAL SIN	9141	4378	0	4378	546.19	8.02
03	VISNU KUMAR	(300-K)	RAVINDRA K	9159	4220	0	4220	539.30	7.82
04	DHARMENDRA KUMAR	(418-K)	KALI CHARA	9193	4142	0	4142	529.42	7.82
05	MUKESH KUMAR	(292-K)	BADAM SING	9165	5030	0	5030	646.46	7.78
06	SUBHASH CHAND	(393-K)	JAGDISH PR	9162	5897	0	5897	762.19	7.74
07	JONY	(346-K)	BANGALI RA	9174	3989	0	3989	515.72	7.73
08	MANOJ KUMAR	(268-K)	GIRRAJ SIN	9204	5532	0	5532	730.79	7.57
09	KOSHAL SINGH	(324-K)	SHIV LAL	9166	2099	0	2099	277.42	7.57
10	BATASHI LAL	(284-K)	RAM LASHIN	9247	3041	0	3041	403.74	7.53

AGRA JNNURN DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
ANALYSIS OF DSL.AVG
CATEGORY : ICICI BANK

SNO.	DRIVER		FATHER NAME		K.M. ACTUAL	K.M. DEAD	K.M. TOTAL	DIESEL	AVERAGE
01	PUSPENDRA SINGH	(76-.)	HARI KESHA	1238	801	0	801	191.98	4.17
02	SATYADEV	(118-.)	BALVEER SI	0127	1099	0	1099	261.23	4.21
03	MAHANVEER	(79-K)	SHYAMVEER	1214	3900	0	3900	917.09	4.25
04	VEERPAL SINGH	(21-K)	UDAY RAM	0143	3651	0	3651	843.86	4.33
05	DAMODAR SINGH	(316-K)	ISWARI PRA	0143	1085	0	1085	247.86	4.38
06	YASHPAL SINGH	(254-K)	NAHAR SING	9138	4454	0	4454	1014.99	4.39
07	DHANESWAR	(37-K)	SATYANARAY	0083	1938	0	1938	436.81	4.44
08	DAYA SHANKAR	(29-K)	KALASH CHA	1215	2917	0	2917	652.65	4.47
09	HARIOM	(47-.)	RAMVEER	1209	4063	0	4063	909.80	4.47
10	PRAMOD KUMAR	(398-K)	RAMESHWAR	9170	849	0	849	187.33	4.53

MATHURA DIESEL AVERAGE

AGRA MATHURA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
ANALYSIS OF DSL.AVG
CATEGORY : CONTRACT

SNO.	DRIVER	DRIVER CODE	FATHER NAME		K.M. ACTUAL	K.M. DEAD	K.M. TOTAL	DIESEL	AVERAGE
1	HARENDRA SINGH	(253-N)	KHUSI RAM	9691	4816	0	4816	714.00	6.75
2	RAKESH KUMAR	(708-N)	HARI SINGH	9145	5187	0	5187	768.00	6.75
3	PURSHOTTAM SHARMA	(538-N)	LALIT KUMA	9691	5037	0	5037	783.00	6.43
4	KANAHIYA LAL	(555-N)	TULA RAM	9045	6048	0	6048	947.00	6.39
5	OM PRAKASH	(568-N)	SHIV GANES	9142	5588	0	5588	896.00	6.24
6	SHYAM SINGH	(609-N)	SUMMERI SI	9146	3551	0	3551	573.00	6.20
7	PITAM SINGH	(640-N)	KISHAN LAL	9073	5677	0	5677	917.00	6.19
8	HUKUM PAL	(707-N)	UDAICHAND	9015	6781	0	6781	1110.00	6.11
9	NAHAR SINGH	(819-N)	NETRAPAL	9562	4751	0	4751	777.00	6.11
10	MUKESH KUMAR	(794-N)	FUL SINGH	9144	5261	0	5261	863.00	6.10

AGRA MATHURA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
ANALYSIS OF DSL.AVG
CATEGORY : CONTRACT

SNO.	DRIVER	DRIVER CODE	FATHER NAME		K.M. ACTUAL	K.M. DEAD	K.M. TOTAL	DIESEL	AVERAGE
1	KAPTAAN SINGH	(588-N)	RAM KHILAD	9692	3378	0	3378	669.00	5.05
2	BRIJ MOHAN	(560-N)	DAYA NAND	9686	4747	0	4747	930.00	5.10
3	UMESH CHAND	(799-N)	TOTA RAM	9685	3694	0	3694	716.00	5.12
4	JAGDISH PRASAD	(643-N)	DEEP CHAND	9891	2875	0	2875	553.00	5.12
5	RAJVEER SINGH	(441-N)	BAHORI LAL	9140	3825	0	3825	730.00	5.19
6	MAHAVIR SINGH	(597-N)	KISHAN SIN	9040	2582	0	2582	491.00	5.20
7	MAHENDRA SINGH	(798-N)	SHYAM SUND	9043	2288	0	2288	428.00	5.20
8	JAY SINGH	(783-N)	TEZ SINGH	9321	5260	0	5260	976.00	5.23
9	RAKESH	(628-N)	RAJAN SING	9693	2640	0	2640	487.00	5.24
10	OMVIR	(728-N)	PREM SINGH	9040	3551	0	3551	650.00	5.26

DVR SOFTWARE
REPORT- BUS WISE FUEL AVERAGE DATA

AGRA BUS WISE FUEL AVERAGE

AGRA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
ANALYSIS OF DSL.AVG
CATEGORY : BUS WISE

SNO.	COACH NO.	CHASIS K.M.	K.M. ACTUAL	K.M. DEAD	K.M. TOTAL	CNG	AVERAGE
1	UP80BM 9182	260051	2124	0	2124	291.21	7.29
2	UP80BP 9160	127507	2747	0	2747	372.04	7.38
3	UP80BP 9152	346287	4254	0	4254	575.66	7.39
4	UP80BM 9196	389597	3805	0	3805	513.16	7.41
5	UP80BM 9161	326605	5907	0	5907	790.95	7.47
6	UP80BM 9166	236050	4344	0	4344	581.48	7.47
7	UP80BM 9185	88292	4786	0	4786	640.55	7.47
8	UP80BM 9247	287953	3041	0	3041	403.74	7.53
9	UP80BM 9171	297685	4687	0	4687	617.51	7.59
10	UP80BM 9162	279843	5897	0	5897	762.19	7.74
11	UP80BM 9165	242198	5030	0	5030	646.46	7.78
12	UP80BM 9193	249333	4142	0	4142	529.42	7.82
13	UP80BP 9141	180865	4048	0	4048	515.96	7.85
14	UP80BM 9174	232846	3418	0	3418	432.96	7.89
15	UP80BP 9266	183255	3616	0	3616	450.32	8.03

MATHURA BUS WISE DIESEL AVERAGE

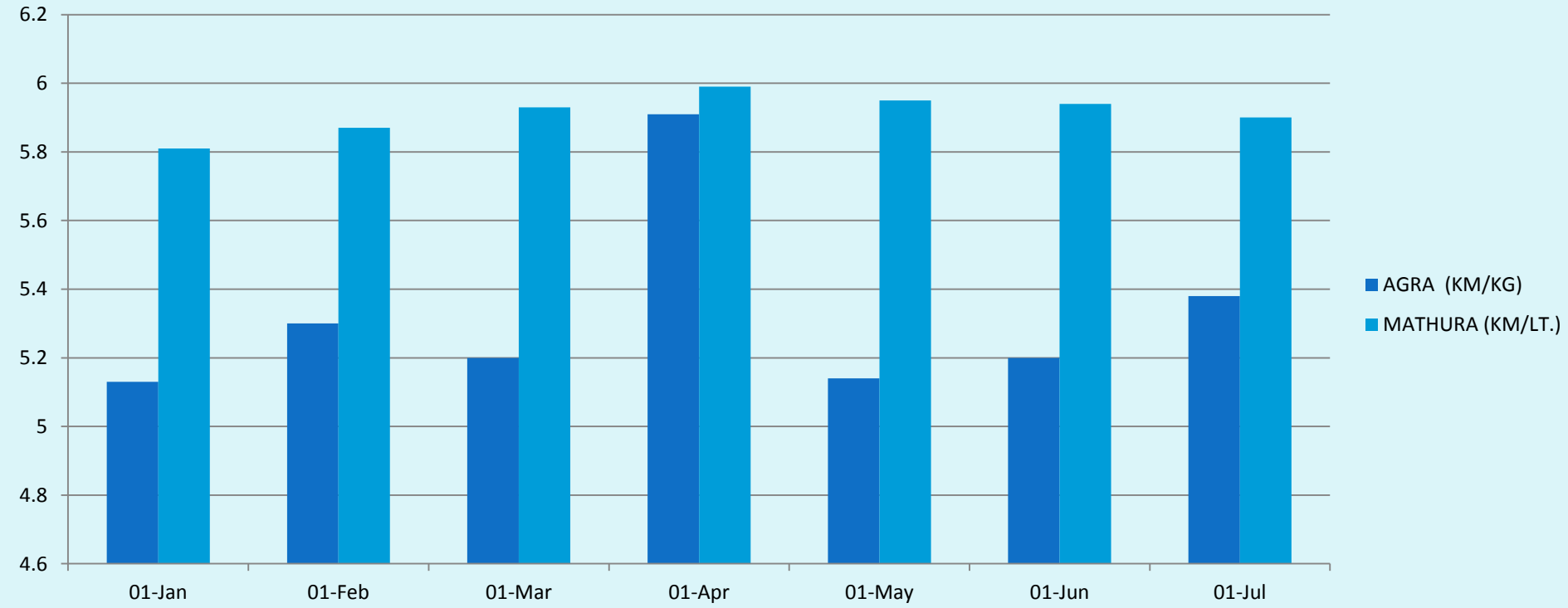
AGRA MATHURA JNNURM DEPOT.
PERIOD : 01/08/2019 TO 31/08/2019
ANALYSIS OF DSL.AVG
CATEGORY : JNNURM CORP.
GROUP :BUS WISE

SNO.	COACH NO.	CHASIS K.M.	K.M. ACTUAL	K.M. DEAD	K.M. TOTAL	DIESEL	AVERAGE
1	UP85X 9686	3281	7985	0	7985	1338.00	5.97
2	UP85X 9687	5218	9368	0	9368	1568.00	5.97
3	UP85X 9894	4499	10398	0	10398	1742.00	5.97
4	UP85X 9017	2445	5710	0	5710	955.00	5.98
5	UP85X 9042	4074	9773	0	9773	1629.00	6.00
6	UP85X 9075	3092	7420	0	7420	1231.00	6.03
7	UP85X 9562	3193	7574	0	7574	1256.00	6.03
8	UP85X 9040	3345	6962	0	6962	1153.00	6.04
9	UP85X 9689	248	7174	0	7174	1187.00	6.04
10	UP85X 9556	3415	8692	0	8692	1437.00	6.05
11	UP85X 9557	3038	8663	0	8663	1433.00	6.05
12	UP85X 9015	3312	7411	0	7411	1215.00	6.10
13	UP85X 9563	2637	6249	0	6249	1022.00	6.11
14	UP85X 9073	2460	7593	0	7593	1221.00	6.22
15	UP85X 9142	2728	6224	0	6224	999.00	6.23
16	UP85X 9045	3424	7614	0	7614	1206.00	6.31
17	UP85X 9145	3156	7693	0	7693	1207.00	6.37
18	UP85X 9691	4310	9981	0	9981	1517.00	6.58
19	UP85X 9895	2453	5789	0	5789	760.00	7.62

FUEL AVREGE DATA

AGRA (C.N.G AVERAGE) AND MATHURA (DIESEL AVERAGE)

MONTH	JAN 19	FEB 19	MARCH 19	APRIL 19	MAY 19	JUNE 19	JULY 19
AGRA (KM/KG)	5.13	5.30	5.20	5.91	5.16	5.20	5.38
MATHURA (KMPL)	5.81	5.87	5.93	5.99	5.95	5.94	5.90



Agra City Bus Improvements In Operation

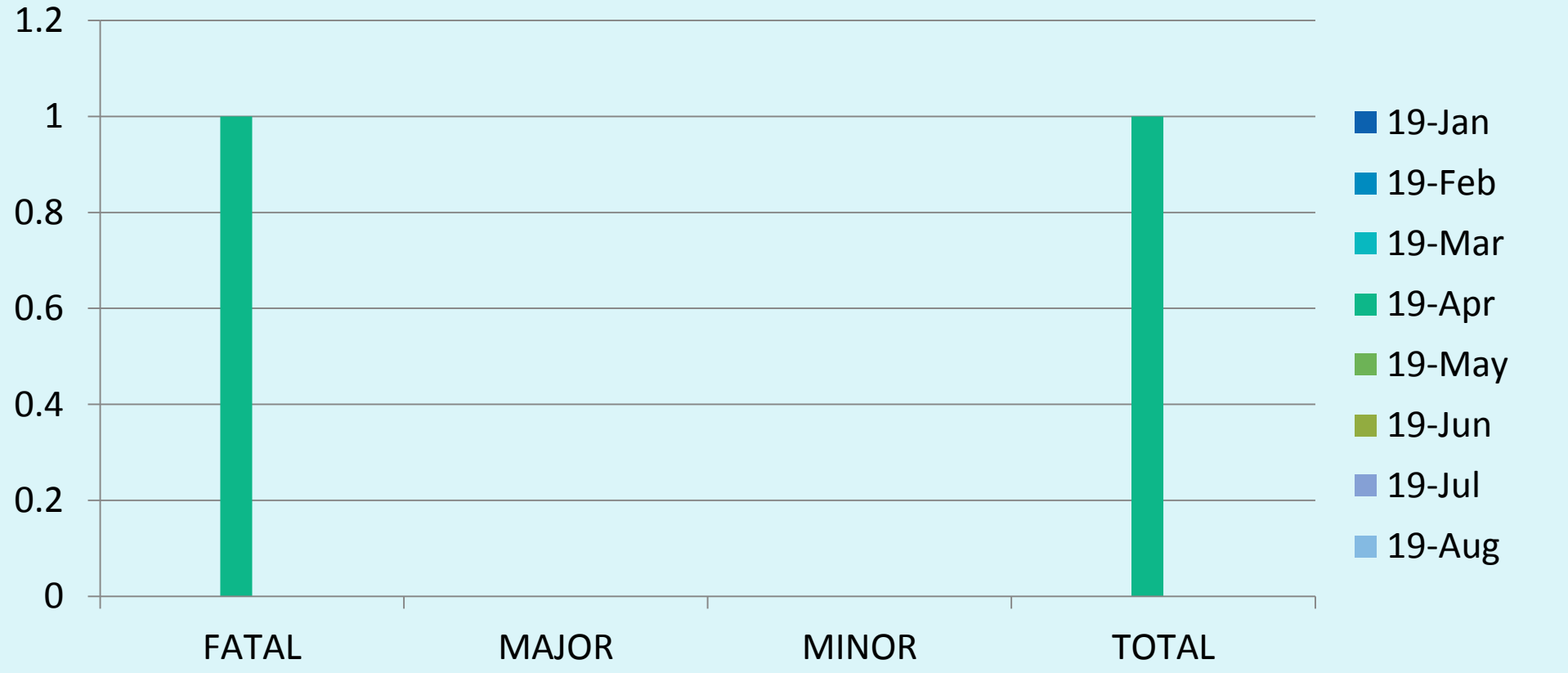
Parameters	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Income	758.63	1122.25	1257.58	1213.63	1105.04	1000.02	1125.35	1297.86
Income per k.m.	12.87	14.52	18.47	17.71	18.30	18.23	18.79	21.32
Earning K.M.	59.69	77.30	68.09	68.53	60.40	54.87	59.90	60.88
Load factor	58	66	84	80	83	82	85	96
Fleet Position	170	170	170	170	170	170	170	170

Mathura City Bus Improvements In Operation

Parameters	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Income	539.70	704.76	878.77	783.89	803.59	813.14	839.13	983.29
Income per k.m.	12.07	13.43	16.56	16.33	17.08	18.05	19.15	21.42
Earning K.M.	44.73	52.46	42.64	48.00	47.90	45.04	43.82	45.91
Load factor	55	61	75	75	78	75	77	81
Fleet Position	60	60	60	60	60	60	60	60

ACCIDENT DATA

MONTH	JAN 19	FEB 19	MARCH 19	APRIL 19	MAY 19	JUNE 19	JULY 19	AUG 19
FATAL	0	0	0	1	0	0	0	0
MAJOR	0	0	0	0	0	0	0	0
MINOR	0	0	0	0	0	0	0	0
TOTAL	0	0	0	1	0	0	0	0



MOBILE APPLICATION BASED PASSENGER INFORMATION SYSTEMS: A PREREQUISITE FOR SMART CITIES

Introduction

Mobile apps are changing the way we live and work in our constantly growing cities. They have influenced our work of doing shopping, ordering food and above all hire taxis at will. Apps of prevalent taxi aggregators provide instant gratification and seamless accessibility to the otherwise expensive and painful to obtain taxi services.

That said, public transport seems to be lagging in this space, often losing ground to privately run aggregators. While the rich can pay for expensive rides, the shrinking proportion of people on public transport are making it difficult for the cities to run mobility services for the bottom of the pyramid. While the developed country cities have well run passenger information systems, enabling such access, the emerging market is only opening to such systems.

The Concept

A typical mobile app for public transport aggregates multiple modes of transport in one unified map-view. This data can come via crowd sourcing, however GPS based real time data gives the much needed accuracy and visibility of modes.

P.T.O.

The market has several public transport information systems which provides intelligence about public transport to passengers, and in some cases to transport agencies and third parties. The core objective of such apps, however, remains to make it convenient and attractive for people to use public transport, thereby reducing traffic, accidents, green house gases, and resulting health issues that our cities face every day.

Enhancements may come in form of:-

- More easy to understand through scientifically designed route-search.
- More predictable results through advanced analytics and real time information (where available)
- More enjoyable through dedicated community management and news and alerts section

At the core of it, the apps run on the premise that better accessibility, instant gratification and scientific recommendations help people overcome the last hurdle in using public transport efficiently. The growing market and resulting users of public transport are clearly a good sign for the forgotten story of public transport.

The multi-modal, real-time and context specific advantage

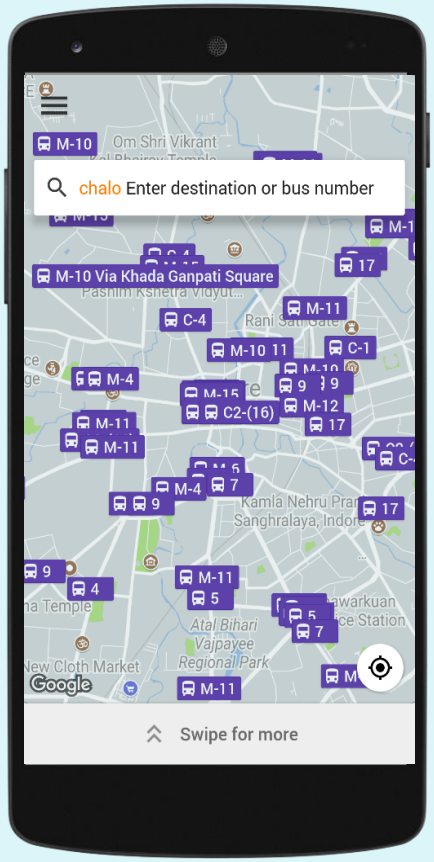
The market's leading applications put a lot of emphasis on authenticated, aggregated and real time information. Public transport in emerging markets has to constantly compete with taxi aggregators and para-transit modes like auto-rickshaws and mini-buses.

The former provides instant gratification by not only bringing the transport to one's doorstep but also showing it clearly on a map as a car aimed for its destination, making it easier on the users to factor for uncertainty and derive comfort from.

The latter bridges the last mile connectivity gap and is often the mode of choice given the uncertainty around the arrival, routes and navigation around a complex combination of modes of formal public transportation. Para-transit is also more approachable and context responsive, a difficulty in our context light connected world of apps.

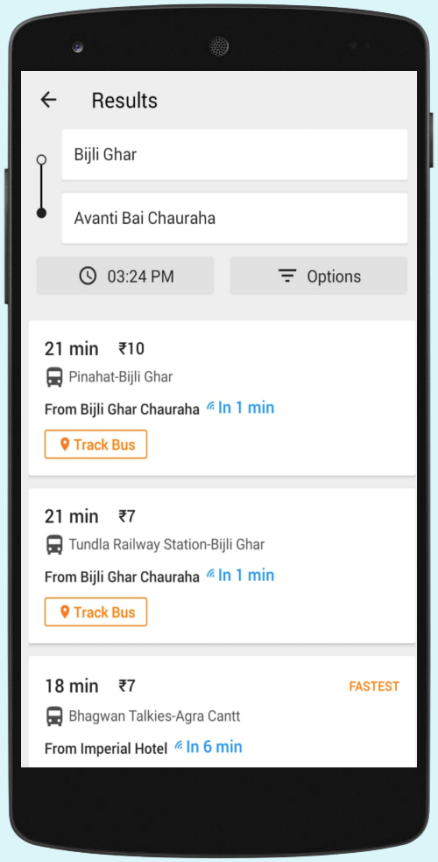
Chalo For Agra & Mathura Commuters…

Live Buses



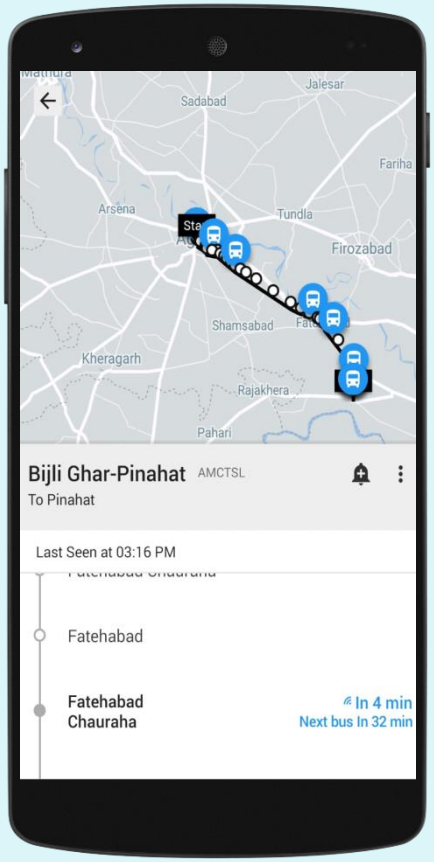
- Only application to show live buses in India
- Modular, scalable and extensible architecture and proprietary algorithms enable complex use cases

Journey Planner



- All modes of city travel integrated with hyper-local nuances
- Configurable search options across criteria like fare, time, waiting and walking distance

Expected Time of Arrival



- Integration for in-app booking of cabs and auto-rickshaws

Agra-Mathura Open Data (Chalo Mobile App)

Key Features

Track Your Bus Live

We use GPS devices in city buses and stream their locations live to your screen. With just one tap you can see the exact location of every bus, and know what time it will reach your stop.

Live Arrival Time Of Your Bus

Our real-time proprietary algorithm processes millions of data points to calculate the live arrival time of your bus. All you have to do is tap once on your bus stop, and plan when to leave accordingly :-)

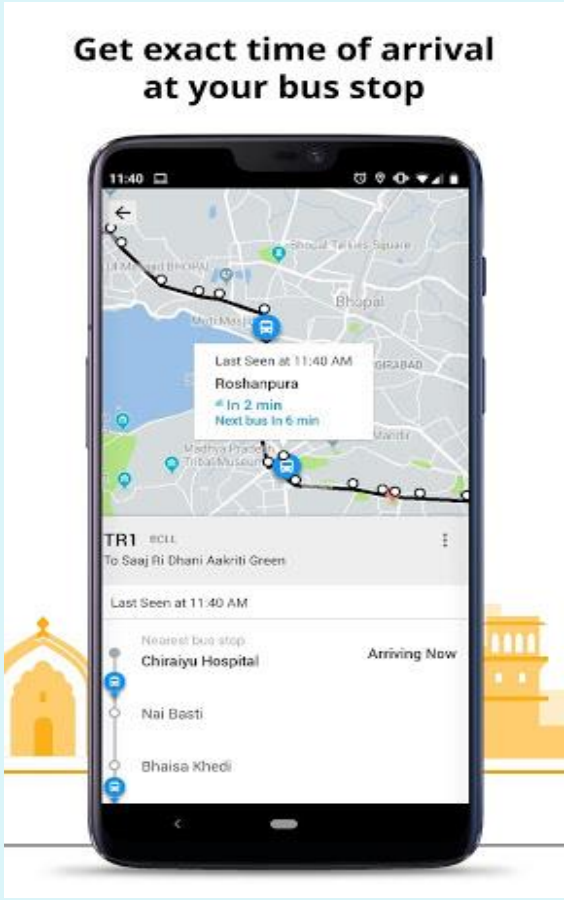
Find The Cheapest And Fastest Trips

Just enter your destination into the Trip Planner to instantly see all the trip options available, including the cheapest and fastest ones.
Our trip planner works across all modes of public transport available in your city - buses, trains, metro, ferry, auto rickshaws, taxis and more!

P.T.O.

➢ **Track Your Bus Live-** We use GPS devices in city buses and stream their locations live to your screen. With just one tap you can see the exact location of every bus, and know what time it will reach your stop.

➢ **Find Live Arrival Time Of Your Bus-** Our real-time proprietary algorithm processes millions of data points to calculate the live arrival time of your bus. All you have to do is tap once on your bus stop to see the live arrival time of your bus, and plan when to leave accordingly :-)



➢ **Find The Cheapest And Fastest Trips-** Just enter your destination into the Trip Planner to instantly see all the trip options available, including the cheapest and fastest ones. Our trip planner works across all modes of public transport available in your city - buses, trains, metro, ferry, auto rickshaws, taxis and more.

➢ **Mobile Bus Pass-** Chalo's mobile pass feature has made it possible to buy a mobile pass directly through the app. Now you don't have to wait in long winding queues at the pass counter anymore to buy a pass. After buying the pass on the app, just show it to the conductor on your phone while traveling for a hassle-free travel experience.

➢ **Additional Features-** Locate the closest bus stops, ferry points and metro / train stations near you- Available in 7 languages English, Marathi, Hindi, Bangla , Malayalam, Assamese and Kannada Chalo was previously known as Zophop.

CHALO APP

CHALO App Benefits use- in AMCTSL

Before	After
▪ Let the app before the passengers of the bus location was not get and just the timing and the route on how buses are driven. ▪ Passengers at the bus shelter for the bus time don't know lived. ▪Passengers a stoppage from the second was not lived. ▪ Passenger this Chalo app use to age quite happy with.	▪ This Chalo app from the mobile in the Play Store can be downloaded. ▪ This app use to be quite time saving and accurate information. ▪ Chalo app the Passengers through the facility. ▪ The travel time of the buses live location finding time-saving to do. ▪ Chalo app by passengers that the root information on which buses would conduct is. ▪ During the journey from one place to another until the arriving information can take. ▪ This app the traveler in all of city buses location seeing travel planning can. ▪ During the trip the bus stoppage on how much time the bus is coming and how just at eh coming of its information.

Passenger Benefits through Chalo App
Next Stopage announceme-nt and display within the bus
Real Time Information of bus arrival /departure.
Chalo app Available in 7 different Languages
Reduced waiting time at bus shelters
Use of Mobile App thought 3G/4G internet data
Comfortable trip planning
Open Data/ Mobile app/ Google Map
Real time Tracing
Utilization of Computer Portal-Chalo app

Chalo App (Over Speed and Route Deviation) Before and After Six Month Difference

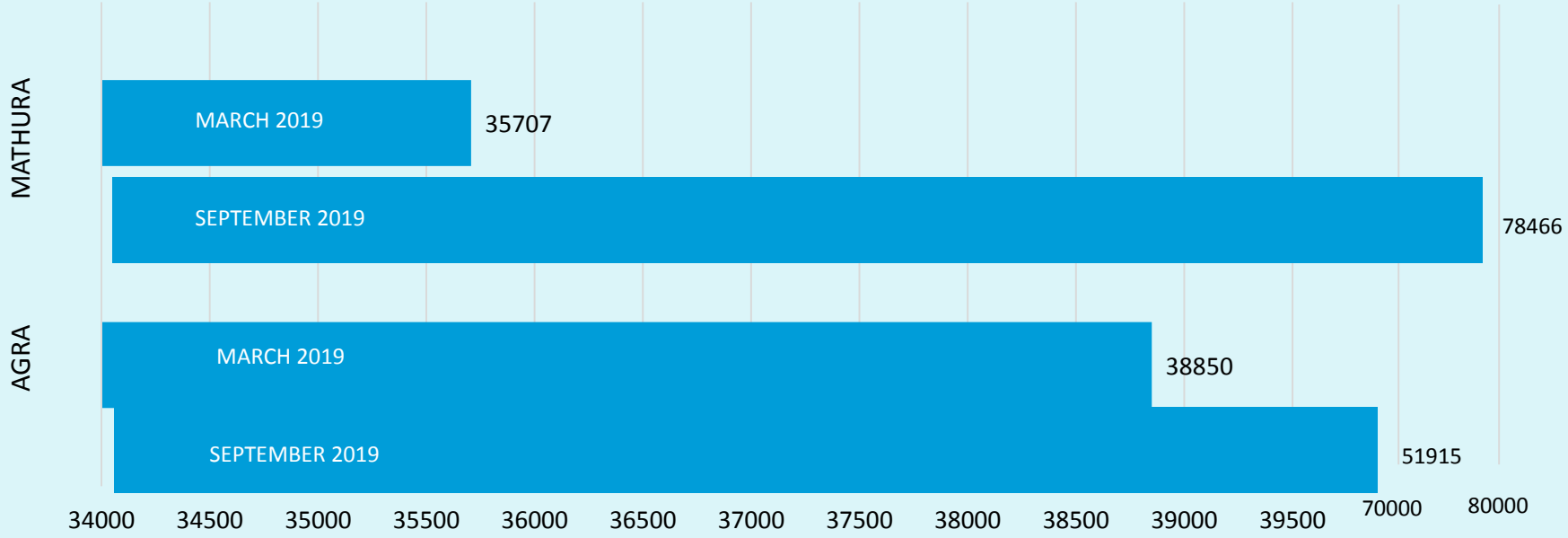
Month	March 2019	September 2019
(Over- speed)	118	34
(Route Deviation)	123	21

- Drivers Periodic counseling/Monthly training is provided in order to reduce accidents/improve driving habits.
- Regular monitoring of over speeding & Rout diversion & Taking corrective actions has improved the situation.
- By the Chalo App lessen the Vehicle's Over Speed and controlled the accidents.

Chalo App (Download of Public app)
During last Six Month period

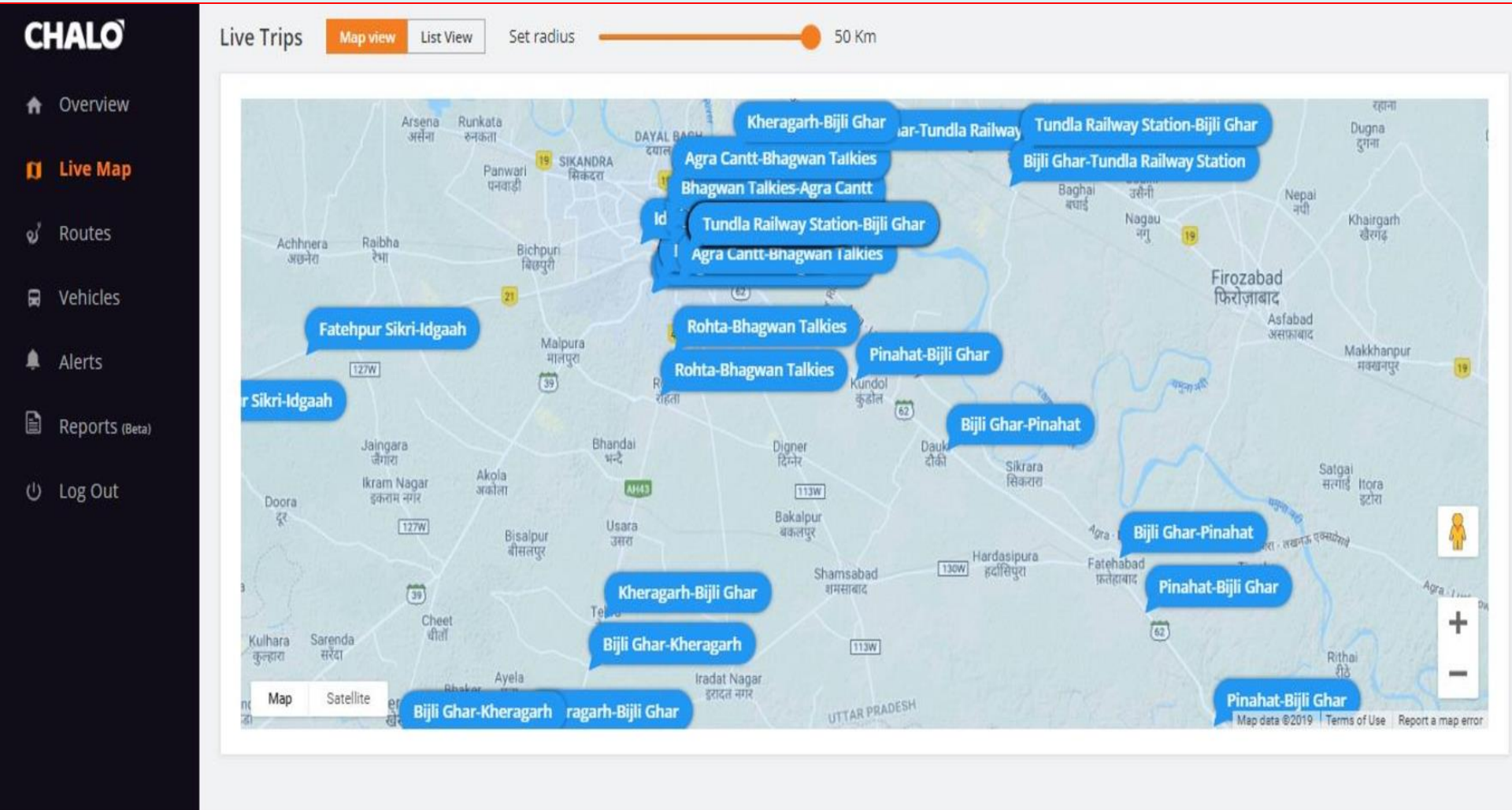
Increased in download indicates benefit & faith in Chalo App

Month	MARCH 2019	SEP 2019	Increased
MATHURA	35707	78466	42759
AGRA	38850	51915	13065



Live Map Screen on Route

A. Map View – Shows all the buses with their route number running in the city at that particular moment; Adjust the radius to see more/ less area



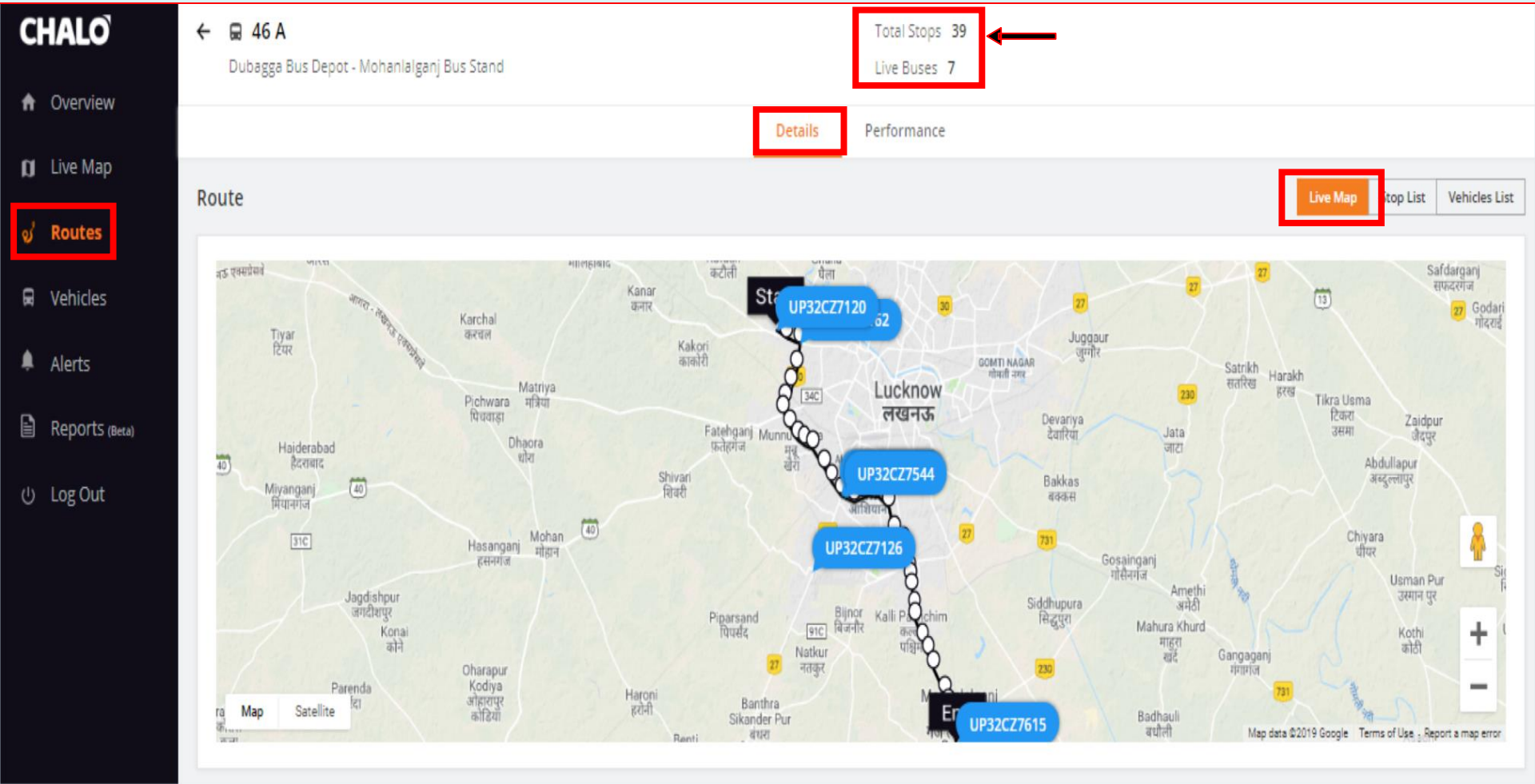
Routes Screen *(Details Tab)*

Shows –

1- Live status of the route with all the buses running on it along with their vehicle number

2- Tells total number of stops and number of live buses on the route

3- You can see live map, stop list and all the vehicles which are running on the route



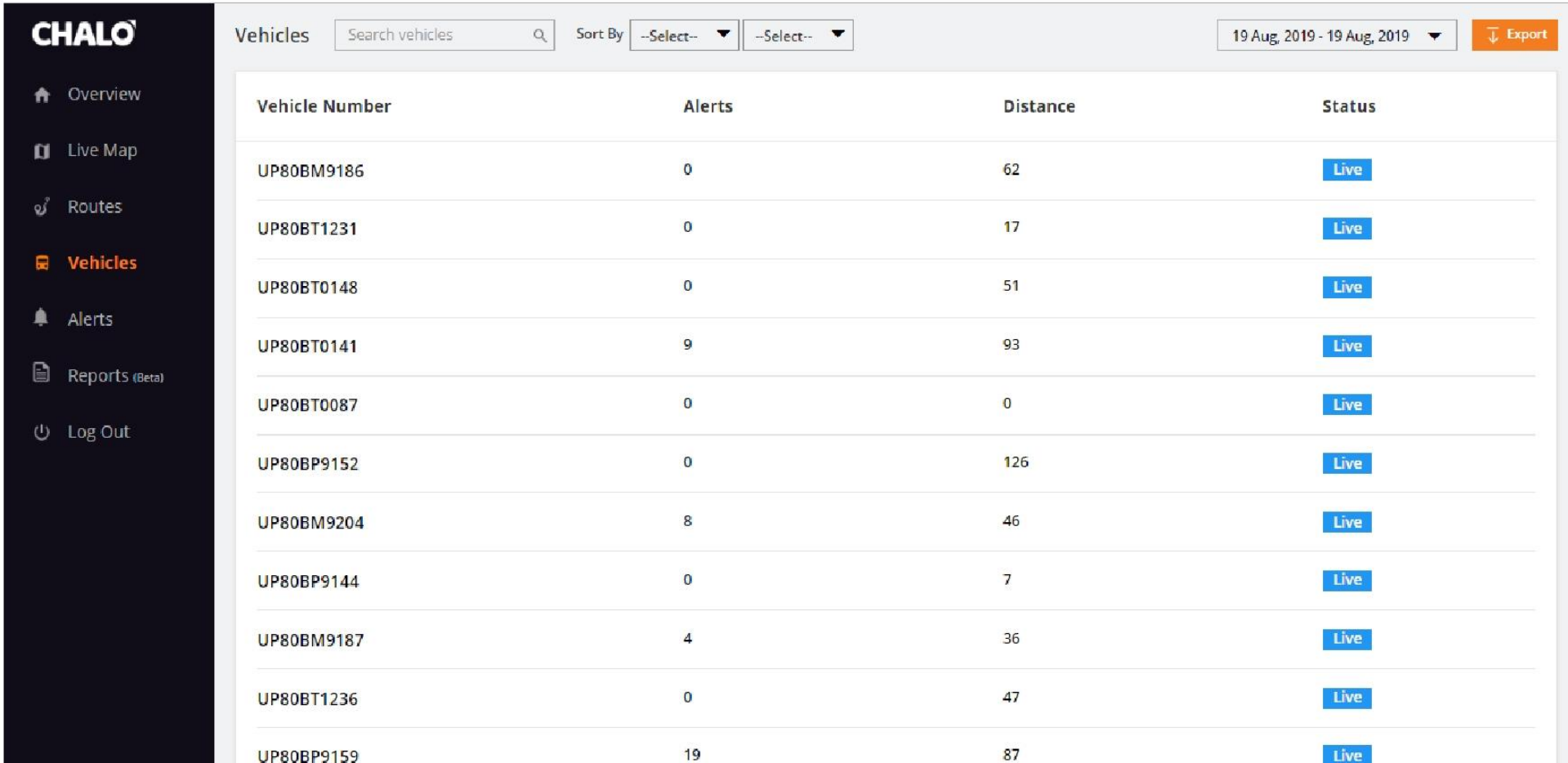
Vehicles Screen

Shows –

1- Details of all the vehicle for the selected date range. (Default is display data of previous day)

2- You can see alerts and total distance travelled by the vehicles and sort accordingly

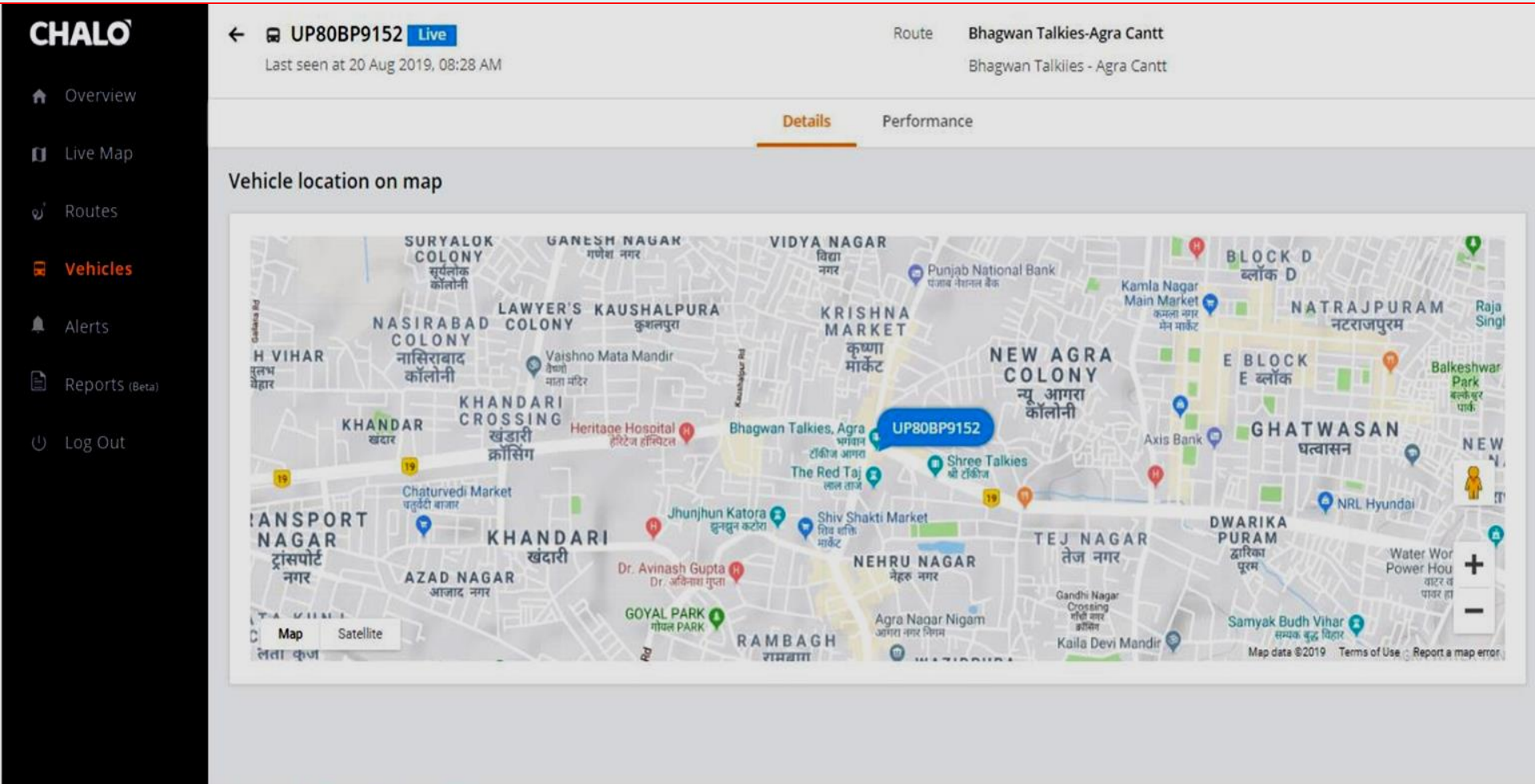
3- Vehicles- You can directly put the Vehicle number and You can sort on the basis of distance or alerts.



Vehicles Tab (Details Tab)

Shows-

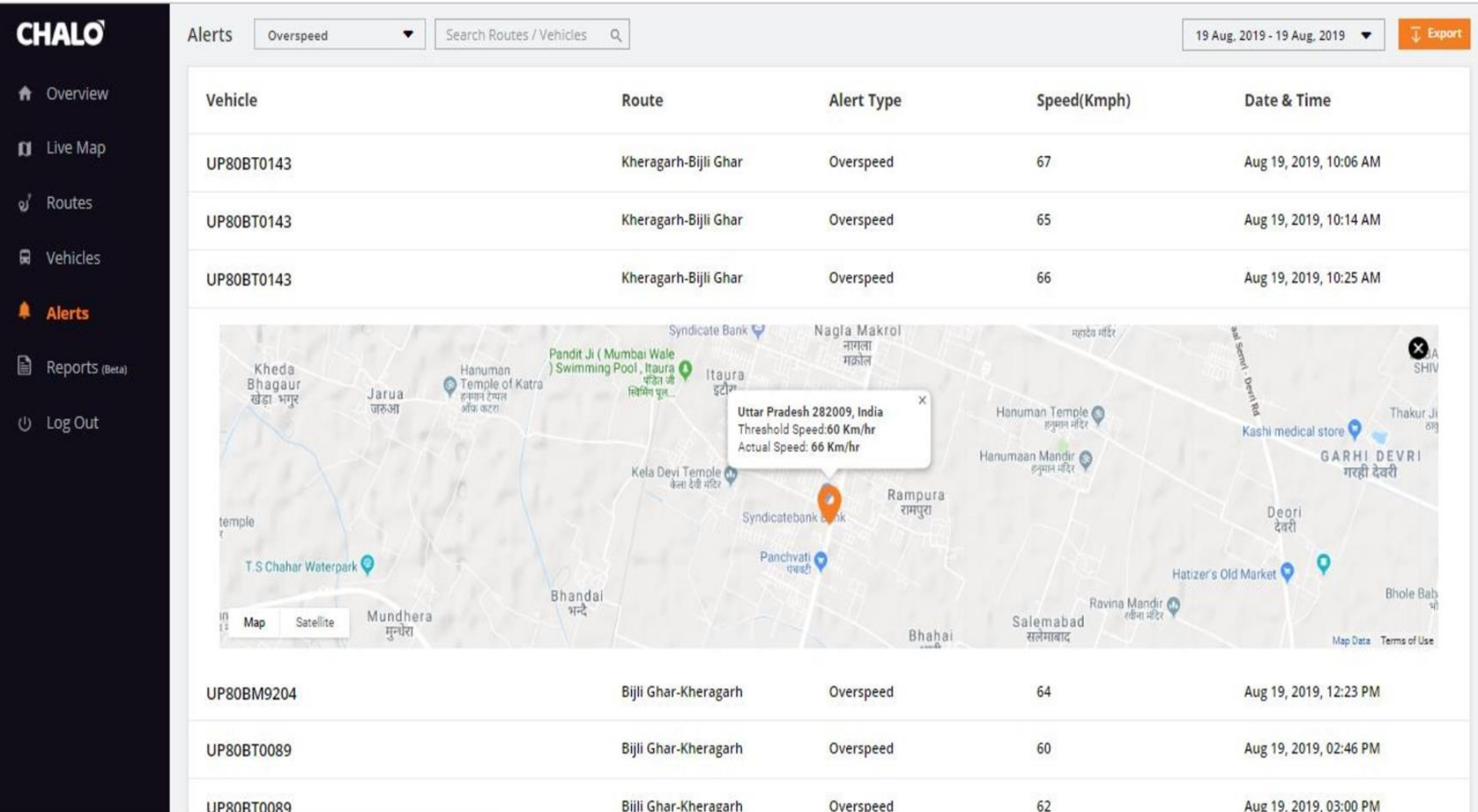
- The current location of the vehicle on the map along with route information.
- Exact time stamp is mentioned below the vehicle number.
- Bus number live- Data and time at which the location is being displayed.



Alerts Tab (Over- speed)

Shows-

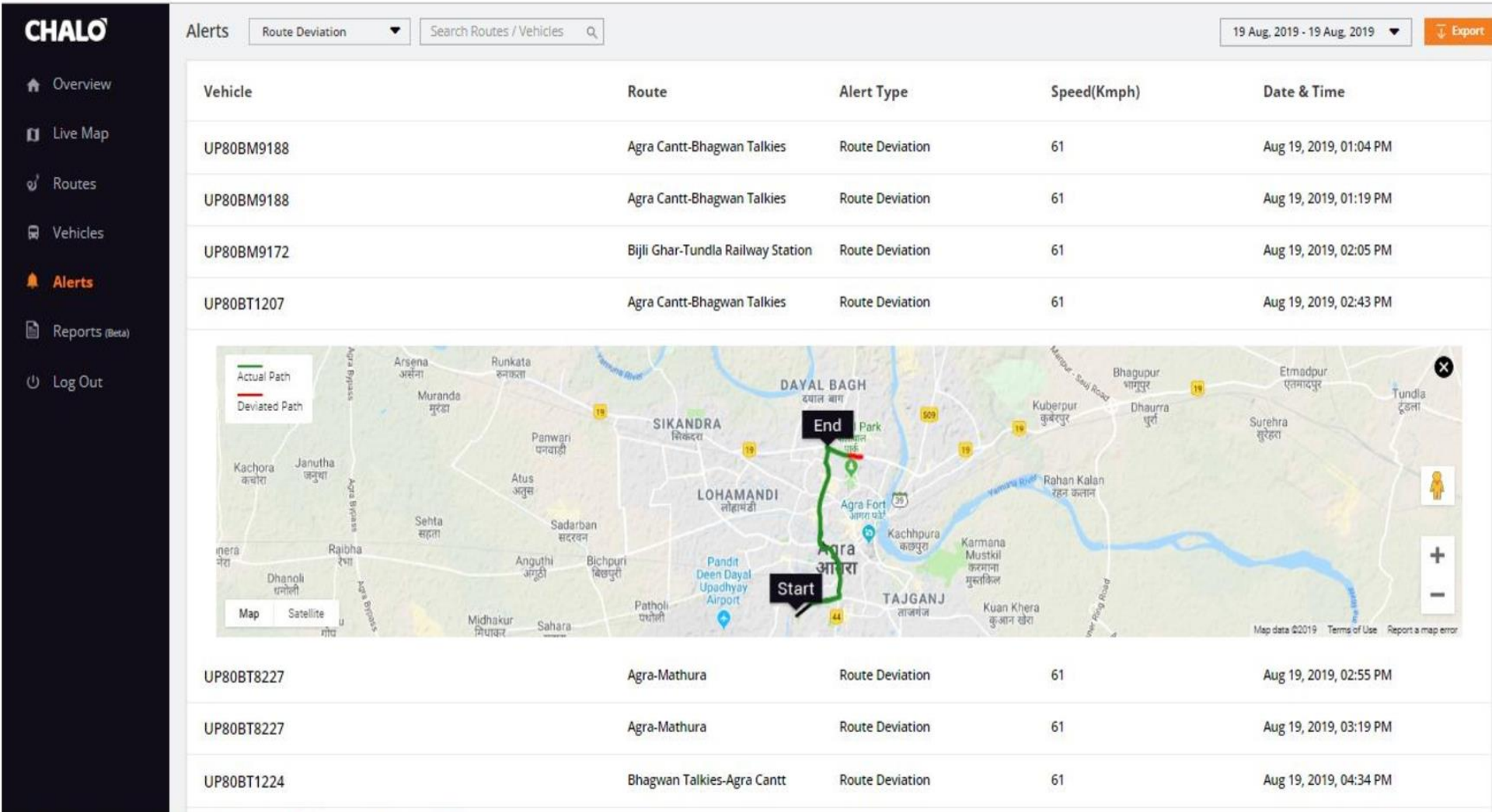
- Location at which over speeding occurred.



Alerts Tab (Route Deviation)

Shows-

- Location at which over route deviation occurred.



Thank you